



College AND UNIVERSITY Business

NOVEMBER 1951: Is Internal Audit Control Necessary? • Revising Building Codes • In-Service Training for Purchasing Agents • Indirect Costs in Research • College Athletics • Faculty Club Food Service



Is Your School a Breeding Ground for Sneezes?

The answer probably is *yes*—if your classrooms suffer from *overheating and underheating*—as most classrooms do.

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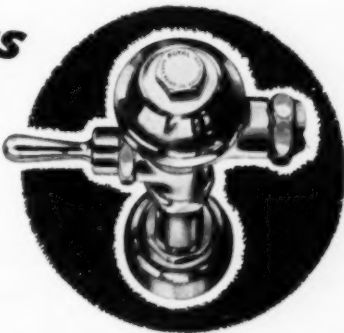
floors provides exterior beauty, with maximum daylight inside. It also permits the most efficient subdivision of space. Complete air conditioning assures utmost comfort and work efficiency. Typical of the high standards set for *all* equipment was the installation of SLOAN Flush VALVES—another example of preference that explains why...

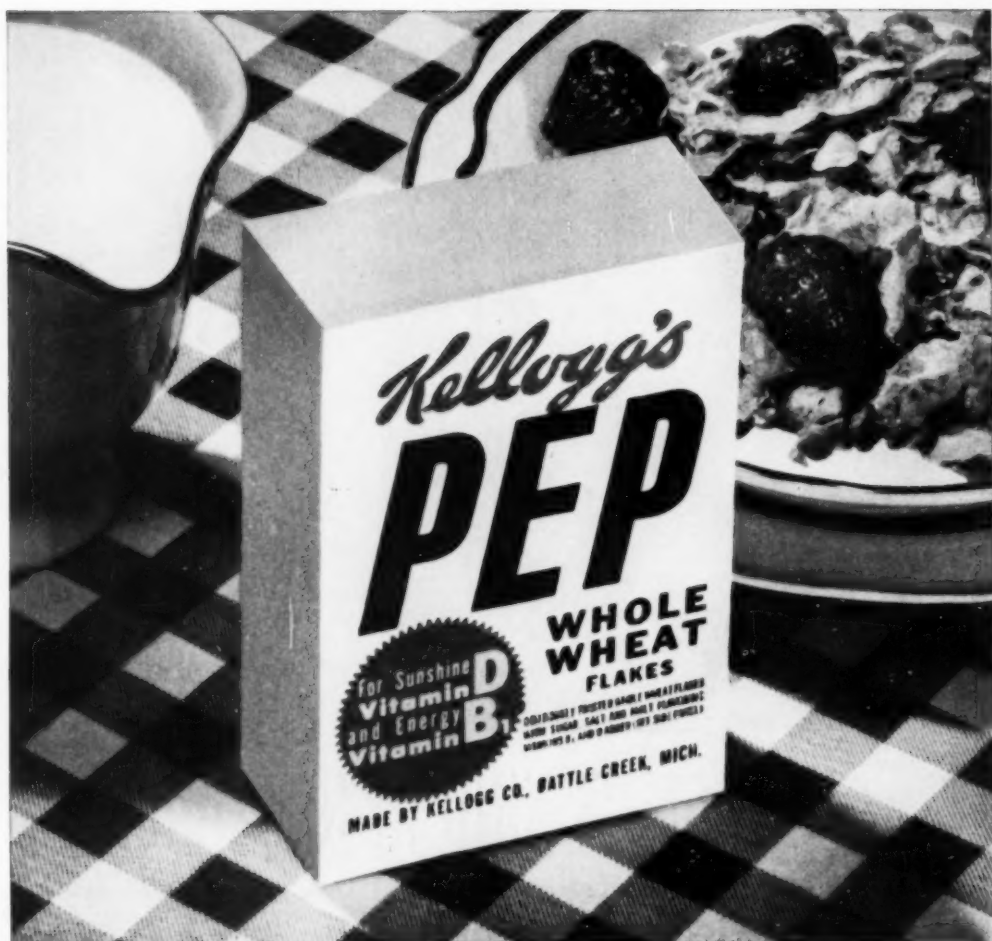
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NEW YORK 17, N.Y.
MU rray Hill 3-2445

PACIFIC COAST
REPRESENTATIVES
McDONALD-THOMPSON
LOS ANGELES, SAN FRANCISCO
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Published monthly by The Nation's Schools Division, The Modern Hospital Publishing Co., Inc., 919 North Michigan, Chicago 11, Ill., U. S. A. Otho F. Ball, president; Raymond P. Sloan, vice president; Everett W. Jones, vice president; Stanley R. Clague, secretary; J. G. Jarrett, treasurer. Copyright 1951, by The Nation's Schools Division, The Modern Hospital Publishing Co., Inc. Acceptance under Section 34.64, P.L.&R., authorized. Published on the tenth of the month of the date of issue. Change of address should be sent thirty days in advance of publication date.

Vol. 11, No. 5, November 1951

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Among the Authors



John L. Watson

JOHN L. WATSON, assistant controller of the Oregon State System of Higher Education, begins on page 19 to discuss the need for internal audit control and the extent to which it should be applied in a college or university. Before accepting his present appointment in 1947, Mr. Watson had been a C.P.A. in the neighboring state of Washington where he had gained considerable experience in industry and business accounting. . . . FRANK F. MORRIS, personnel officer of Pennsylvania State College, graphically presents on page 26 the procedures followed in acquainting staff members with retirement benefits and other phases of the personnel program of the college. Mr. Morris was a telephone company representative for six years prior to joining the college staff in 1941.



Howard F. Smiley

HOWARD F. SMILEY, assistant business manager of Wheaton College at Wheaton, Ill., outlines on page 24 the technics employed in conducting a job evaluation survey of the college staff. Prior to joining the administrative organization of the college more than three years ago, Mr. Smiley had been general superintendent of the Badger Lumber Company of Kansas City, Mo. During World War II he carried the rank of major in the U.S. Air Force and was a pilot in the Aleutians; for a year following the war he was a Northwest Airlines pilot. Antedating his war experience was a law practice in Eau Claire, Wis.



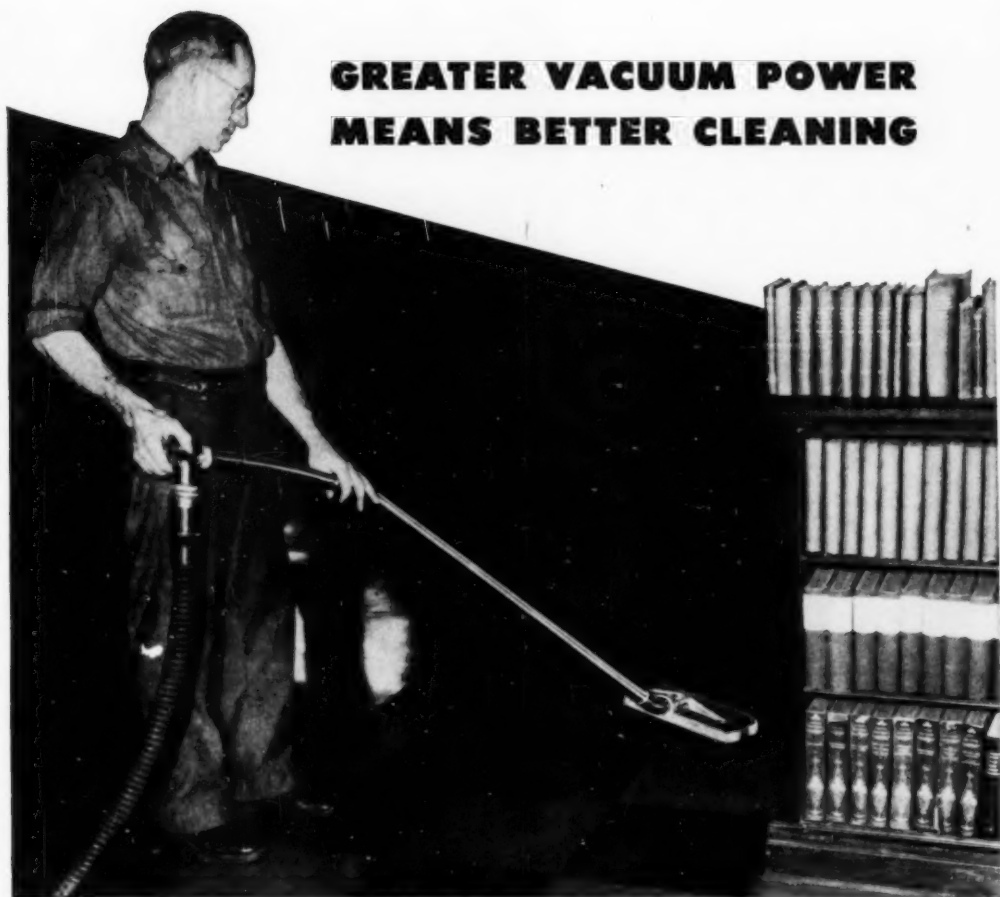
Ben P. Brodinsky

BEN P. BRODINSKY, Washington editor and writer, points out on page 28 the necessity for improving building codes as an aid in reducing construction costs. He is editor of the *Educator's Washington Dispatch*, a fortnightly newsletter service, and was a federal radio education specialist with the U.S. Office of Education from 1933 to 1941. He is co-author of "America Prepares for Tomorrow," Harper & Bros., 1941, and has written articles for *Parents' Magazine*, *American Home*, the *Nation* and other magazines. During the war he was editor for the War Manpower Commission and the War Relocation Authority. . . . WILLIAM T. MIDDLEBROOK, vice president of the University of Minnesota, reports on page 35 the problems that are involved in attempting to work out research contracts with federal agencies. He has been chairman of an inter-association committee of college and university business officers that has been concerning itself with this problem for many months.



Jimmy Evans

JIMMY EVANS, Chicago radio and television sportscaster, outlines on page 47 what he thinks college football needs during these days of commercialism and current scandals. A graduate of Northwestern University, where he starred in football and baseball, he has been in sports broadcasting since 1935. The late Knute Rockne of Notre Dame is said to have called Evans "one of the greatest guards in modern football." He is a past president of Northwestern's "N" Club.



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Questions and Answers

Acoustical Materials

Question: What procedures should be followed in the proper maintenance of acoustical material?—J.N., Del.

ANSWER: These suggested general methods for maintenance of acoustical materials are recommended:

Perforated materials may or may not have washable surfaces. Those that are washable can be cleaned with a sponge dampened with mild soapy water and rinsed with a dampened sponge. Loose dirt also can be removed by brushing or vacuum cleaning. The vacuum cleaner nozzle of the attachment should be drawn lightly across the surface of the acoustical tile in one direction. This prevents rubbing dust into the surface. Nonwashable materials can be cleaned with a good wallpaper cleaner. Fresh cleaner should be used, since old cleaner often gets sticky and does not do as good a job. Any mark or smudges that are not removed by washing usually can be cleaned off quickly with an ordinary artgum eraser.

Fissured materials should be washed with a minimum amount of water, since moisture can have injurious effects on the materials. Care should be taken not to injure the fissured surface during cleaning.

Perforated metal pan materials are easy to wash because of the smooth enamel finish on the tile. It is necessary, however, to be careful not to force water through the tiny holes in the metal surface, as water forced through the holes will run back, forming unsightly small circles around the perforations. It is recommended that soapsuds be applied with a good paint brush (4 inch bristles) rather than with a sponge.

There are two methods of repainting acoustical materials: spray painting and brush painting. When painting acoustical materials, care should be taken not to close up the perforations or fissures. If care is taken, the acoustical material may be repainted numerous times without the acoustical properties of the material being impaired.

A good grade of flat oil paint, suitable for interior finishes, is recommended for general use in repainting all acoustical materials. Sometimes enamel paints can be used. Water paints

should not be used since they have a tendency to warp acoustical materials.

Spray painting is the more desirable method of applying the paint because it provides a smooth even coat, and there is not as much chance of clogging the surface openings. The paint should be thinned as much as necessary for proper spraying, and a solvent recommended by the paint manufacturers should be used.

After all loose dust has been removed from the material with a brush or vacuum cleaner, the paint should be applied with a light spray directed against the surface from all four directions in turn. A rotary motion will give a uniform coating on the inner sides of the perforations or fissures. This method is recommended for most perforated wood fiber, fissured mineral wool, and fissured cork tile. In the case of a perforated metal tile, the paint stream should be directed squarely against the surface of the material, the gun being moved back and forth to get a uniform coating.

In brush painting, careful workmanship is important. The brush used should be approximately 4 inches wide, with $4\frac{1}{4}$ inch fine bristles. After the acoustical material has been cleaned in the same way as for spray painting, it may be necessary to thin the paint to a consistency that will not close the perforations or fissures. In general, paint should be thinner for use on fissured materials than for perforated materials.

The brush should be wet thoroughly with paint. The excess paint should

be wiped from the outside of the brush. If beveled materials are used, paint should be first applied to all four bevels of the unit. The surface of the material should be touched at several points so as to distribute the paint evenly, and this paint should be brushed out to a uniform coating.

Tuition-Board Refunds

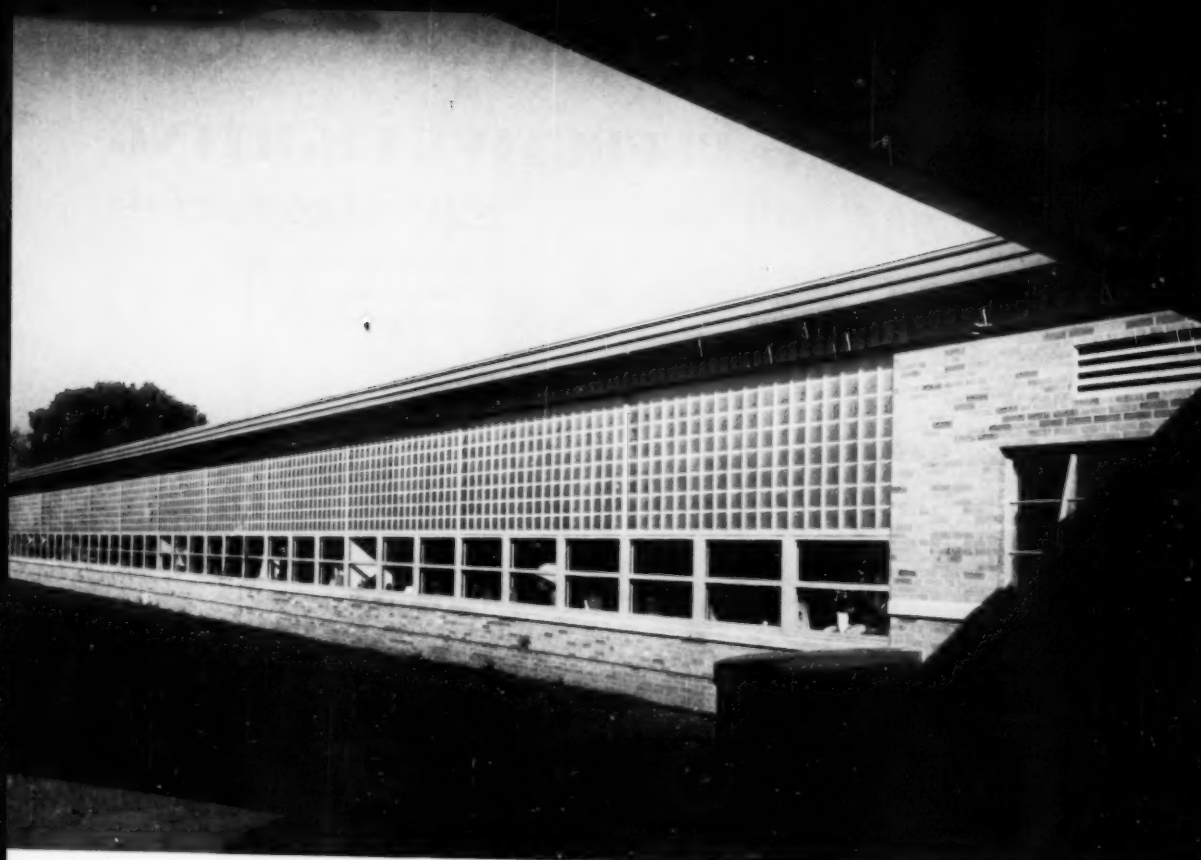
Question: What reimbursement of board charges and tuition fees should be made to those students who withdraw from college?—S.B.K., Mass.

ANSWER: With one or two music school exceptions, the following is a statement of tuition refunds at Northwestern University:

Tuition Charges. A student is held for tuition and fee charges unless he withdraws officially within the first 10 days of the quarter. A student who withdraws within the first 10 days of the quarter is held for the payment of his matriculation fee only. A student who withdraws or is excluded for nonpayment after the first 10 days and before the end of one-fourth of the quarter is held for all fees plus one-fourth of the tuition charges. A student who withdraws or is excluded after the first one-fourth of the quarter and before the middle of the quarter is held for all fees plus one-half of the tuition charges. A student who withdraws or is excluded after the middle of the quarter is held for all tuition and fee charges. The date on which the official withdrawal notice is received at the division of student finance or the date of formal exclusion is the withdrawal date used in figuring any financial adjustments.

Residence Charges. Residence hall contracts are signed for the academic year. A student who withdraws from the university and leaves his residence hall during any quarter will be held for the entire year's room rent or for charges to the date on which the room is again rented. The student will be held for board charges until the end of the week in which his formal withdrawal blank, properly signed, is received at the division of student finance.—WILLARD J. BUNTAIN, director of dormitories, Northwestern University.

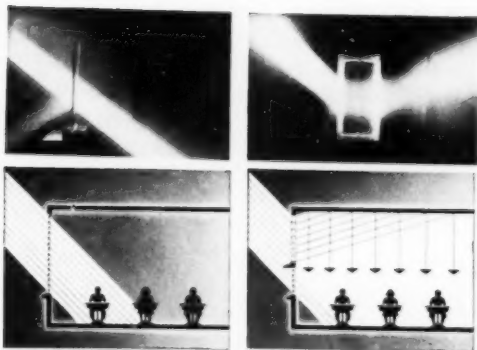
If you have a question on business or departmental administration that you would like to have answered, send your query to COLLEGE and UNIVERSITY BUSINESS, 919 North Michigan Avenue, Chicago 11, Ill. Questions will be forwarded to leaders in appropriate college and university fields for authoritative replies. Answers will be published in forthcoming issues. No answers will be handled through correspondence.



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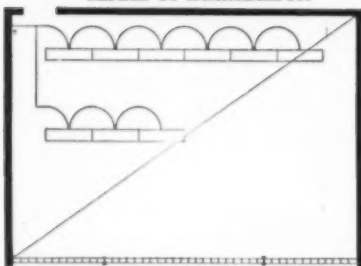
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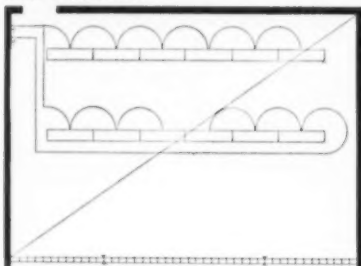
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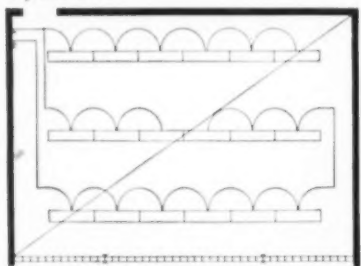
1 Use Functional Lighting Layouts, Requiring Minimum of Luminaires.



Saves 1 1/2 rows of luminaires—Minimum plan to supplement daylight. Utilizes 1 1/2 rows of fixtures; corrects for body shadow cast by daylight from window-wall.



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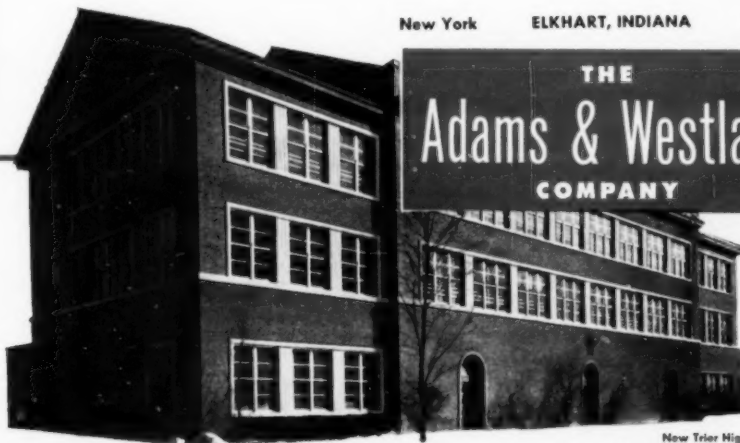
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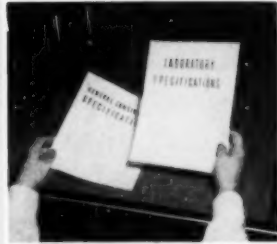
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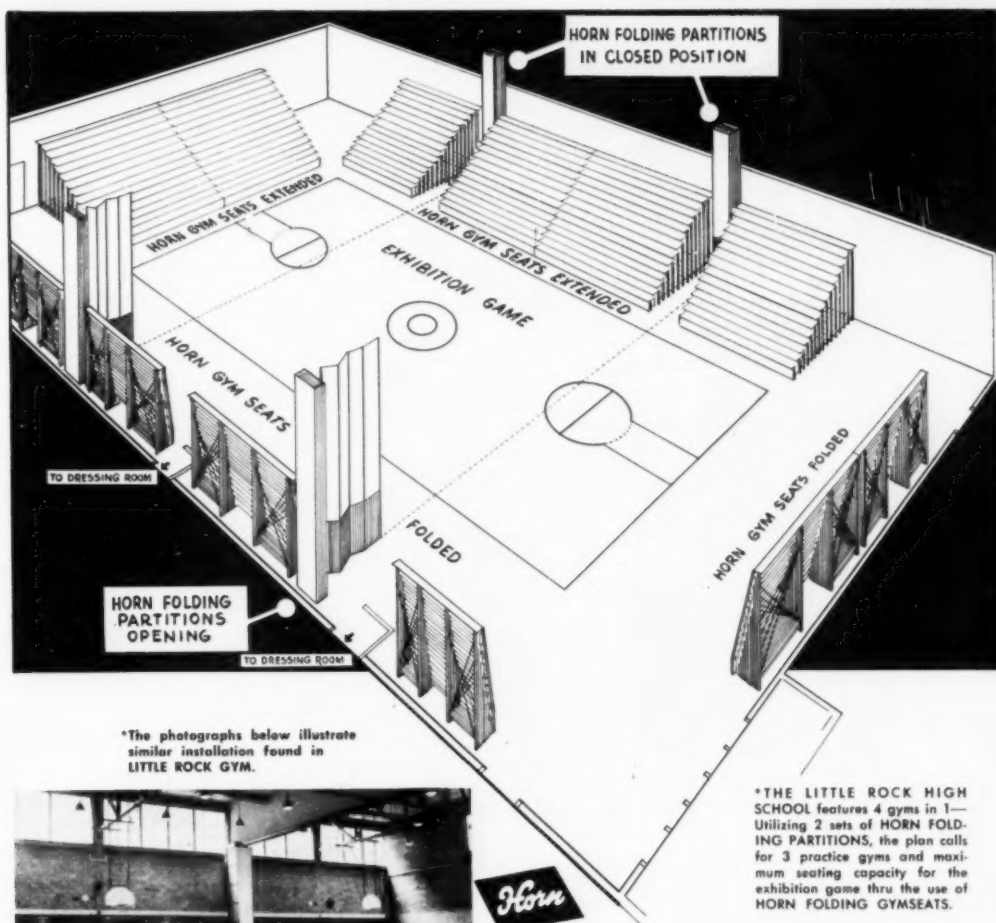
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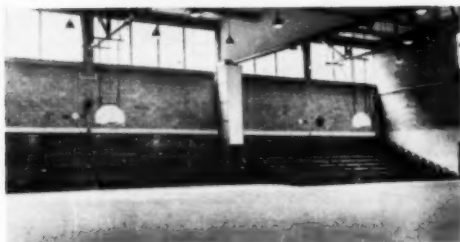
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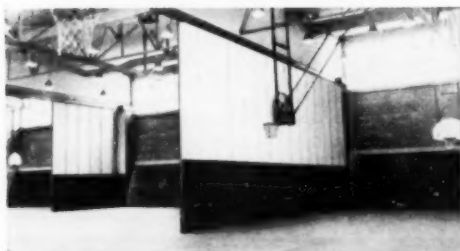
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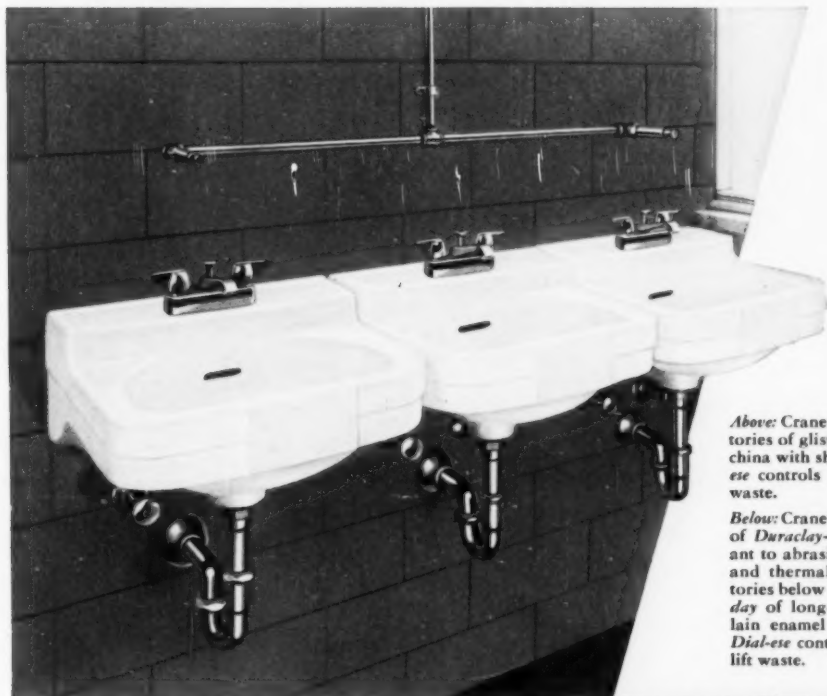
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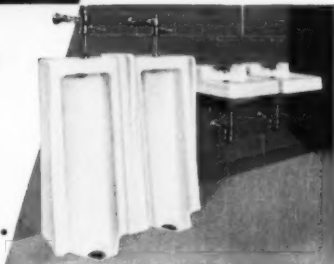
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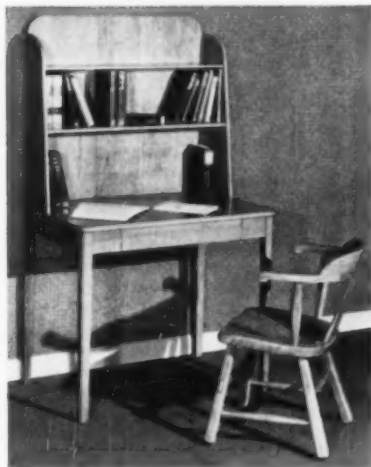
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IS OUR TAX EXEMPTION ON THE WAY OUT?

T. E. BLACKWELL

Vice Chancellor and Treasurer
Washington University, St. Louis



MANY OF US ARE SOMETIMES PRONE TO FORGET that exemption from taxation is not an inherent right of educational institutions. The justification for releasing them from the tax burden has been based upon the fact that they purport to perform essential functions that would otherwise require support from the proceeds of taxation itself. Relief of the indigent, care for the ill and injured, and education of the youth of the country were early recognized as functions that might appropriately be delegated to charitable organizations and corporations.

It should be noted that this willingness to delegate the public functions of poor relief, care of the infirm, and education to institutions not subject to the direct control of the electorate could manifest itself only in a community convinced of the inherent superiority of private initiative over bureaucracy. By granting tax exemption to organizations willing to assume such public functions, it was anticipated that wealthy individuals could thereby be encouraged to give more liberally and thereby relieve the state of a portion of its burdens. However, public sentiment in favor of extending tax exemption to educational institutions has varied widely during the period of national development.

At one time, during the middle of the Nineteenth Century, several state legislatures were granting charters to colleges and universities giving them complete tax exemption on all forms of property, even upon business property held as investment of funds. Once granted, such charters could not be withdrawn by subsequent legislation. Under the doctrine of the Dartmouth College case, the Supreme Court of the United States has held that such charters constituted irrevocable contracts between the state and the founders of such institutions. A few fortunate colleges still hold such unique charters.

Under the present constitution of South Dakota "all property owned by religious, educational, charitable or benevolent societies, regardless of its character, extent, location or purpose for which it is used," is exempt from taxation. However, in the

majority of American jurisdictions, the property to be exempt must be used exclusively for educational or other charitable purposes. In a recent case, the supreme court of Pennsylvania held that an institution in order to qualify for tax exemption "must give its services free of charge, or at least so nearly free of charge as to make the charges nominal or negligible, and that those to whom it renders help or service must be unable to provide for themselves." Few colleges and universities, even those supported by taxation, could meet this narrow test.

Until last year, the voters of California had refused to grant the privilege of tax exemption to church owned schools below the college level. The exemption statute did not become effective until Sept. 21, 1951, and there is already a strong movement to rescind the legislation by referendum. The recent willingness of Congress to tax the income of foundations organized to hold and manage business property, even though the income had been dedicated for the support of education, is indicative of the trend of public sentiment. There is a growing tendency to weigh relative values. To what extent is it in the public interest that educational institutions shall continue to enjoy tax exemption?

Upon those of us convinced of the vital importance of endowed institutions of higher education to the American way of life rests the responsibility of convincing the electorate of the value of the service it renders to the community and to the nation. We need to reaffirm the soundness of the philosophy that government should continue to encourage private initiative in the field of education and charity as well as in the field of commerce and industry. We must find cogent arguments to combat the fallacious doctrines of statism so in evidence in certain of our governmental agencies.

Tax exemption is a privilege and it must be so considered by all institutions that enjoy it. We must see to it that our institutions continue to merit the public confidence thus expressed.

Looking Forward

What's the Answer?

IT WAS INEVITABLE. COLLEGE ATHLETICS, AS BIG time entertainment, was due to come a cropper one of these days. The picture is not pretty. The damning aspect of the sordid mess is that it was camouflaged for so long by college administrators. It would not have flourished without the tacit approval or connivance of those who determine institutional policy.

Heading the list of guilty parties are the trustees, or regents, and the college presidents. What's happened to the original premise that college athletics was part of a wholesome educational process? Have college presidents and trustees lost all sense of proportion in regard to what higher education is about? Isn't it ironical that a coach is said to be building character only when he's plagued with a losing team?

The pressure to go big time in football and basketball is terrific. Rabid alumni, genuine and synthetic, cry for a winner and imply dire consequences if the administration does not roll with the punch. Fund raising efforts will be unsuccessful, student enrollment will fall off, and a variety of other calamities will take place if encouragement is not given to recruiting students with superior athletic ability.

The Kefauver committee's work shocked the nation with its exposé of corruption in government. The shock was not that such corruption existed; rather, that it appeared to be so widely condoned. The current scandals regarding college athletics, serious in themselves, become more serious as valiant efforts are made to defend the system. The public can rightly wonder: "Is this an educational institution—or a well organized carnival?"

Sanity—and a proper sense of values—may save the day, but the odds are against it.

Competitive athletics have a proper place in a college program, as does an intercollegiate debate team or traveling glee club. But let's maintain some perspective. At some colleges the choir or glee club wags the school—no better in philosophy than the college that permits the athletic department to be the tail that wags the curriculum. The same arguments are used, too: It recruits students, it encourages benevolence—and it's just as phony.

It would be an innovation, perhaps, but we could try running a college as an educational institution. What makes a college great is not its football team—

it's the quality of its teaching. It's an old-fashioned idea, maybe, but higher education needs to discover some of the old-fashioned virtues.

Case Histories

SOME MORE ABOUT FOOTBALL! NEWSPAPERS AND magazines within recent weeks have brought to light interesting cases of the hypocrisy of collegiate athletics.

Allen Jackson, first string guard on the University of Michigan football team for the last three years, states the case bluntly and forcefully in his article "Too Much Football" published in the October issue of the *Atlantic Monthly*. If a college official is complacent after reading it, his values are out of joint.

The Rev. Hunter Guthrie, president of Georgetown University, cogently proclaims "No More Football for Us" in the October 13 issue of the *Saturday Evening Post*. He points out that big time football isn't the gold mine it's credited with being and that it prostitutes the educational purpose of the institution. The article is recommended reading for presidents and business managers, as is the October 20 article in the same magazine by Blair Cherry, former Texas coach.

The University of Denver is having its troubles with Ernest Nemeth, who was injured in spring football practice in 1950. The State Industrial Commission of Colorado, through its referee David F. Howe, has accepted Nemeth's disability claim for payment of \$13 weekly from June 12, 1950, until his current disability is ended. Referee Howe said evidence at the hearing showed that while Nemeth performed outside work to earn his room and \$40 per month, he did nothing to earn his food except play football. Newspaper reports state that "no comment was forthcoming from university officials concerning the referee's decision." What can they say when they're caught with the goods?

If there is interest in improving an admittedly bad situation, college administrators will want to read "A Christian Approach to College Athletics" by Martin O. Juel, which appears in the October 1951 *Association of American Colleges Bulletin*. Mr. Juel is health coordinator of Southwest Texas State College.

This is a lot of space to devote to college athletics, but the malodorous condition of much of it demands urgent attention. In the past year nothing has done more to discredit the essentially high purposes of higher education than its athletic program.



JOHN L. WATSON
Assistant Controller
Oregon State System of Higher Education

INTERNAL AUDIT CONTROL is necessary

The only question is: How extensively?

BUSINESS OFFICERS OF COLLEGES AND universities have a huge responsibility over the custody and control of institutional resources. With the exception of the chief executive officer, they are pretty much alone in this responsibility.

The educational institution is primarily a service organization where there is no relationship between income and the services rendered. Other officials of the institution concentrate their efforts on the educational process. The institutional resources are consumed in this process either as cash expenditures for services and expense or utilization of fixed assets. Assets lost, stolen, wasted, misused, improperly protected, or improperly expended for material and services not received or of doubtful value must be replenished by additional tax funds, gifts or increased fees.

In a large institution, one man cannot possibly maintain personal control over all the resources and business functions. He must, therefore, employ assistants to take charge of vari-

ous divisions for purchasing, cashiering, disbursing, accounting and auditing. Specific duties are accordingly delegated to each employee on the business staff. It is not always possible to obtain and maintain a full staff of well trained, experienced personnel; consequently, the business officer must guard against clerical errors as well as errors in judgment.

The business officer also realizes that all employees are not 100 per cent honest. National fidelity bonding firms have made the statement that of all the employees bonded, about 25 per cent are honest, 25 per cent are dishonest, and 50 per cent are as honest as the accounting system and procedures will permit them to be.

How does the business officer approach this problem? For one thing, he will maintain comprehensive insurance coverage for protection against fire, employee infidelity, theft, burglary, public liability, and other risks. Fire protection safeguards, campus police and watchman service, and protection of physical properties from the elements can be provided by the physical

plant and campus and grounds personnel. In addition to these and other precautions, the business officer very likely will apply the principles of internal control in establishing business procedures.

Internal control is a broad term and can be divided into at least two phases: (1) internal check, a prescribed system of procedure, and (2) internal audit, the steps taken to determine the effectiveness of these internal check procedures. A special committee on terminology of the American Institute of Accountants defined internal check as: "A system under which the accounting methods and details of an establishment are so laid out that the accounts and procedures are not under the absolute and independent control of any one person—that, on the contrary, the work of one employee is complementary to that of another—and that a continuous audit of the business is made by the employees."

Certain basic principles are inherent in the system of internal check, one of the most important of which is the assignment of duties and re-

From a paper presented before the 13th annual meeting of the Western Association of College and University Business Officers, Santa Barbara, Calif., 1951.

sponsibilities in such a way that one employee will not have complete control over an entire business transaction. Thus, one employee automatically checks the work of another in the routine performance of his assigned duties. It is a well established fact that the possibility of fraud is greatly reduced if collusion between employees must take place in order to divert business assets unlawfully.

Fraud prevention, however, is not the only advantage in a good system of internal check. Clerical accuracy will be substantially increased based on the psychological effect of one employee's checking results with a fellow worker. Errors will be discovered in the early stages when they can be readily and more economically corrected. If clerical errors are not detected and corrected currently, the ultimate cost to adjust the records can become a sizable item of expense. In the meantime, inaccurate and misleading reports may have been distributed.

OTHER IMPORTANT FACTORS

The use of internal accounting forms, prenumbered financial stationery, and mechanical equipment also are important factors in the establishment of an effective system of internal check. Serially prenumbered invoices, checks, deposit slips, and cash receipt forms facilitate the operation of the system of internal check. The wide variety of mechanical equipment available for the performance of accounting functions has made it possible to establish internal check proofs on a large volume of transactions.

The other important phase of internal control is the internal audit. Internal auditing is the positive action taken to determine the effectiveness of the system of internal check. In the absence of a system of internal check, the scope of internal auditing would need to be greatly increased. Internal auditing as referred to here has been considered as a systematic examination of the institutional records and procedures on a selective test, post-audit basis, conducted independently from the routine day-to-day established accounting procedures. This is to be distinguished from the so-called preauditing activities performed as a part of the current routine of the accounting department.

The preauditing of disbursements and the daily scheduling of cash receipts as regular functions of the accounting office are at some institutions

referred to as claims auditing and cash receipts auditing. Such functions are essential as a part of the system of internal check, but, as distinguished from general internal auditing, they are not on a selective test basis and are not conducted independently from the routine accounting procedures.

At this point it may be well to note some of the objectives of internal auditing as classified in a research study of the National Association of Cost Accountants entitled, "The Place of Internal Auditing in Industrial Companies." These objectives, restated as to their pertinence to institutions of higher education, would rate in the following order:

1. Compliance with contracts, board policies, institutional regulations, and business procedures.
2. Verification of the accuracy of entries, transactions and reports.
3. Conservation of assets, including fraud prevention and detection.
4. Review of the business procedures for efficiency, effectiveness and cost.

It is apparent that industry utilizes the services of internal auditing for many purposes other than fraud detection. Educational institutions undoubtedly have a much more complicated financial structure than most commercial organizations, especially in relation to the total dollar investment.

In addition to the educational functions, in which the assessment and collection of tuition and fees constitute no small problem, virtually all institutions carry on an intercollegiate athletic program and operate enterprises of a business nature, such as residence halls, housing units, theaters, student unions, laundries, printing plants, bookstores and student hospitals. All of these activities will conduct a substantial amount of cash or credit business and also may maintain a sizable investment in a stores inventory, operating supplies and operating equipment.

In addition, the educational institution usually operates a student loan fund, which must be administered by following good business practices in administration and accounting, both over the principal and the income. Many institutions also conduct research and testing as a service to business firms. Cash funds are involved. Agricultural research programs produce large sums of cash receipts as by-products of their experimentation and related activities. Hospital and

dental clinics collect sizable cash sums. The activities of an institution can very well be spread over the entire state, with cash funds collected or disbursed at all the various locations. It is obvious that the establishment and maintenance of adequate safeguards over institutional property and cash funds are not easy problems.

Compliance with provisions of contracts entered into by or on behalf of the institution must be properly followed or serious financial problems may be encountered. The V.A. contracts, written on a cost of teaching basis, contain certain provisions regarding the computation of the credit hour rate for cost of teaching. An error of a few cents per credit hour resulting from overstating the total credit hours or from understating the cost of teaching personnel could result in a substantial underbilling.

The V.A. contracts and related regulations on the issuance of books, equipment and supplies are quite complicated and subject to various interpretations. The failure to comply with these regulations could also result in a substantial financial loss. Once an improper issuance has been made to a veteran, it is difficult to effect recov-



Errors detected at an early

ery even if the mistake is discovered currently. Errors in issuance procedure for prior periods are almost total losses. An internal audit over the issuance of books, equipment and supplies pursuant to the provision of the contract with the V.A. would enable the institution to correct faulty practices and avoid retroactive disallowances on future billings.

Over a period of time changes will occur in the bookstore clerical and administrative personnel. Instructional requirements also will change and, as a result, what was once a satisfactory system may have become inadequate. A well designed internal auditing procedure will bring faulty practices to

light currently, before V.A. officials or G.A.O. auditors appear.

All higher educational institutions with V.A. contracts, whether tax supported or private institutions, must face the fact that sooner or later they will likely be subjected to a field audit by one or more federal agencies. If an internal audit division has been in operation, the impact of substantial federal disallowances should be greatly lessened.

The compliance phase of internal auditing also will cover a review of governmental laws and regulations. Federal laws and regulations on income tax, withholding tax, admissions tax, transportation and retail excise tax all present problems in proper administration. The failure to comply with the federal tax regulations eventually may result in an exhaustive investigation that may prove to be both time consuming and costly.

Compliance with board policies, institutional regulations, and business methods includes a wide field of activity from internal check to policy on educational principles.

Conservation of assets covers safeguarding of all institutional money, securities and property, both expend-

able and nonexpendable. Compliance with policies and procedures would overlap to some extent, but new situations arise that are not always covered by clear-cut rules and regulations. The auditor's constant vigilance in protecting the institution's interests will disclose weaknesses in the system of internal check, especially in new fields of activity. Conservation also will extend to purchasing practices, such as bid requirements, personal service agreements, leases and contracts.

Conservation by fraud prevention and fraud detection is, of course, an important part of the internal auditor's responsibility. The emphasis, however, should be on fraud prevention by exercising constant watchfulness over the adequacy of the system of internal check. This watchfulness will be greatly facilitated by the preparation of an internal check questionnaire, a device almost universally used by public accounting firms. It should be designed and filled out by the internal audit staff as an aid in the preparation of the internal audit program. In the auditing procedures performed pursuant to a well designed audit program, the internal auditor verifies the mathematical accuracy, passes on the validity of various transactions, and observes the degree of compliance at the same time that he is detecting and preventing fraud.



stage can be readily and more economically corrected.

Verification of cash, securities, receivables, inventories, supplies and fixed assets does not eliminate the need for an independent certification of accuracy of reports by the outside auditor.

In the course of the verification of the accounting entries and reports, the internal auditing staff must analyze and schedule pertinent accounting data. From these audit schedules, reports, charts and graphs can be prepared at little or no extra cost.

Institutional business and clerical procedures, forms and reports must be periodically evaluated in terms of need and cost. Although the internal auditor is not ordinarily considered to be a systems expert, the nature of his duties

and responsibilities and his familiarity with all business operations are such that he is in a favorable position to judge the efficiency of the specific procedures. He can readily follow up on the use made of internal reports and also ascertain whether or not the data actually used can be obtained from summary reports already in existence. Two or more employees may be performing almost identical functions just because certain forms have been printed and processed in multiple copies since the year one.

Forms and reports have been prepared at some institutions month after month and year after year with no use made thereof. Not infrequently it has been discovered that the report or form was developed, prepared and filed by the same employee. How do practices like this come about? Some of the causes may be reluctance to eliminate or question the necessity of doubtful value reports owing to fear of staff reductions or because of a lack of coordination between departments. A special report may have been requested a year ago and the report continued thereafter.

Overzealous employees, eager to develop new ideas, may design and put into use new forms and reports superimposed on present procedures. The newly designed forms and reports, in many cases, serve a useful purpose, but lack of authority or lack of knowledge of existing forms and reports prevents coordination and, as a result, two sets of related data are prepared, one for internal use and the other for use by another department or agency.

Should the internal auditor report on inefficiency and duplication? Is that a proper function to assign to the internal auditor? Good management should answer in the affirmative. Why? It is generally agreed that fraud detection and prevention constitute a function of internal auditing because it conserves assets.

The pay-roll clerk pads the pay roll by crediting one or more employees with overtime not actually worked. That, of course, is fraud. The institution loses money if it is not detected. In the same department an employee works eight hours or more on a report that no one actually needs or uses except to occupy file space. This may not be fraud, but the institution still loses money.

A carefully designed system of internal check followed up by a sys-

tematic internal or external audit will readily detect and prevent pay-roll padding, but the preparation of doubtful value information is not readily detected by the external auditor unless he has been engaged to make a systems audit. Who, then, should be on the lookout for inefficient and uneconomical practices? The internal auditor is the logical man to be assigned this responsibility. He may not necessarily be an expert on systems work, but he will be trained to recognize inefficient practices. The detection and reporting on such practices constitute the service management needs. Timely location and correction of duplication will result in substantial savings.

In recent years the trend toward automatic mechanical equipment in institutional accounting has been increasingly important. Preliminary study by a competent internal auditor may hasten the transfer from manual operation to mechanical methods by several years or, on the contrary, may save an institution untold expense and grief by forestalling the installation of automatic mechanical equipment until the volume and complexity of the work warrant the expense.

CAN ADJUST SCHEDULE

Automatic mechanical equipment installations have been oversold by the manufacturers as well as prematurely installed. The internal auditor is not generally committed to a set routine and, consequently, is more able to adjust his work schedule in such a way that he can devote time and energy to such special problems.

The services of an internal auditor at an educational institution cover a wide scope of activity in addition to fraud detection and control. Properly organized under a qualified auditor, the internal auditing division can unquestionably render invaluable service to management, to the trustees, and even to the individual staff members. In actual practice, however, few educational institutions operate a separate internal auditing division. There may be many explanations, the most important of which is cost. Management thinks largely in terms of value received in relation to cost expended.

The services of the internal auditing division must be justified in terms of cost to operate. To measure the benefits of internal auditing in terms of dollars and cents is difficult, if not impossible, even if consideration is

given to the long-term effect. Many of the benefits are intangible. The internal auditor may set up and watch over a system of internal check that prevents any defalcation by employees for a period of 10 years. How much has been saved? There is no definite proof of what the losses may have been without the services of the internal auditor.

Comparison can be made with a 10 year period prior to the time of internal auditing, but how can you be sure that all the losses were discovered? The outside auditor doesn't usually verify all transactions in detail. The argument might be advanced to bond all the employees. Defalcations might result in increased rates or even cancellation of coverage. The losses must be detected and established to the satisfaction of the bonding company before collection can be effected. Once the loss is detected, it may be a long, tedious task to determine the actual shortage. If clerical errors, deliberate or otherwise, are involved, additional auditing and investigation will undoubtedly be required to satisfy the bonding company. Before the claim is settled, it may be necessary to engage an outside auditor, especially if an internal audit staff is not maintained.

MANAGEMENT HAS OBLIGATIONS

Another intangible benefit concerns the employees. The management has an obligation to maintain a system of internal check and internal audit that will encourage employee honesty. In many employee defalcation cases, it has been discovered that the dishonest employee had been occupying a responsible position for many years with no irregularities whatsoever. The institution not only lost the money but also lost what probably would have continued to be a valuable employee if the laxness of the system had not been a temptation.

There is one school of thought that advances the view that the officer or official responsible for the failure to establish adequate internal control over institutional assets is almost as guilty as the dishonest employee.

Some savings undoubtedly will be effected on the cost of the outside audit to the extent that the internal auditing procedures follow the same general pattern as the external audit. Precise measurement here also is difficult as the cost of the external audit may vary from year to year.

What about the extent of internal audit control? Obviously, there is no cut and dried formula by which to determine the answer to this question. There are many factors to be considered, such as the size of the institution, the number of branch operations, the scope of the external audit, state audit requirements if a state supported institution, the type and number of auxiliary enterprises, the activities related to instruction, and many others.

Careful consideration should be given to the comments and recommendations of the independent external auditor. His annual audit report, supplemented by an informal discussion, should provide an indication of the areas where internal auditing would be most beneficial to management. Internal auditing is a service to management; consequently, the expense to set up this division must be justified. This justification, to some extent, may show up in actual cash savings, but for the larger part will be measured by the value of the internal audit reports rendered to management.

ADEQUACY A MAJOR FACTOR

The adequacy of the system of internal check is a major factor in the determination of the extent and scope of internal auditing. The areas showing weaknesses or complete lack of internal check over cash handling procedures can then be selected for immediate attention. The operations and activities showing a large volume of cash receipts, accounts receivable, and inventories usually will require specific attention by the internal auditing staff. These areas likely would include cashing functions, especially for student tuition and fees, auxiliary enterprises, activities related to instruction, and physical plant stores inventory operations.

One of the first spots on which the internal auditor should focus his attention is the chief source of institutional cash income, student tuition and fee receipts. The scope and extent of the audit program would depend upon the adequacy of the internal check. This review usually is approached by the preparation of an internal check questionnaire. The strong points and weak points in the system of internal check then will be much more apparent and the audit program can be designed accordingly.

The audit of student tuition and fee receipts is one important function of the internal auditor. The dollar

volume of cash receipts from student tuition and fees would probably of itself justify the expense of an internal audit for each term. Registration records of the students enrolled should provide control figures to which actual cash collections can be compared on an over-all term basis. A properly designed and operated system of registration and fee collection should produce much of this information automatically. In this area alone, the internal auditor, by appropriate test checks and constant vigilance over registration and fee collection procedures, should be able to effect a substantial reduction in the audit work performed by the outside auditor.

Discrepancies, differences and defalcations, if any, will be discovered currently and the causes can thus be corrected with a minimum of loss and expense. The employment of untrained or inexperienced personnel frequently results in an increase in the number of errors and discrepancies. The internal auditor would be able to schedule his cash receipts audits and tests in such a way that he could measure the efficiency of new employees shortly after their appointment. Unsatisfactory or incompetent employees thus would be detected in time to keep discrepancies at a minimum. In the absence of internal auditing, the situation would no doubt be discovered by the outside auditors, but at a much later date and with a greater cumulation of errors as well as added outside audit expense.

UNDER SUPERVISION OF ONE

Auxiliary enterprises constitute another area in which the internal auditor would likely wish to conduct investigations. Usually the auxiliary enterprise is under the supervision of one individual who manages all phases of the operations similar to a commercial business establishment but with oftentimes less accountability to institutional management than in private business. There are opportunities for the manager of an auxiliary enterprise to operate the activity for his private gain by diverting cash, inventory, services and purchasing into unauthorized or illegal channels.

If cash is collected and disbursed directly by the activity, which often is the case, a fairly intensive review and audit may be made of all cash handling and reporting procedures. The audit of a bookstore or student

union, in most cases, will include all the general audit procedures followed in auditing a private business enterprise. These activities frequently employ an extensive amount of student help, which may present additional problems of pay-roll auditing that would not be present in a commercial business where governmental regulations are more pertinent.

Activities related to instruction may include a dairy, hospital, medical and dental clinic, home economics cafeteria, or demonstration schools. Over-the-counter cash collections may be made by all these activities. Accounts receivable of a substantial amount undoubtedly will be involved. Purchases of raw material, demonstration supplies, and other goods often will be used for instructional and experi-



mental purposes. Some of these materials and supplies will be consumed in the education and research processes, and the remainder will be available for sale to the staff and even to the public. This will pose a problem in proper accountability where the cost of a complete program of inventory control might well exceed the cost of supplies unlawfully diverted. This combination of instruction, research and business enterprise is not conducive to a good system of internal check; consequently, the internal audit problem is magnified.

A home economics cafeteria or tea room will present several problems in accountability both for food supplies and for cash collections. Some method of internal check should be set up to provide controls over food and supplies purchased as well as cash receipts for food sales. Cost of food reports, if accurately prepared, will provide some check on the over-all cash receipts. If the reports for cost of food sold are materially out of line with cash receipts, it would be at least an indication that further review may be wise. An operation of this type is not expected to be self supporting, because of the tie-up with instruction

and research, but management does have a responsibility to provide reasonable safeguards against employee or student speculations.

Inventories are almost a universal headache both to management and auditors. Physical plant stores in an educational institution are no exception. The business officer who has a positive and permanent solution to the inventory control problem is fortunate. Because of the diversified activities of an educational institution, it is necessary to maintain a substantial investment in these stores items. This investment will tend to increase unnecessarily from overstocking, obsolescence or poor storage facilities. Stores material, as one of the most liquid assets outside of cash and securities, tends to disappear into unauthorized channels. Under the most favorable conditions, the stores inventory control procedures will develop inaccuracies and discrepancies. The objective is to hold these differences to an irreducible minimum.

Central storage under the supervision of a trained, qualified and highly reliable storekeeper will be most helpful. A perpetual inventory tied into a general ledger control account should be an integral part of the stores accounting procedures for purchasing, pricing and stock control. When these factors are supplemented by an internal auditing program, the institution is well on its way to attain the goal of keeping closer tab on this substantial investment.

PERPETUAL INVENTORY BEST

The internal audit program for stores accounting and stores inventory again will depend upon the degree of internal check in operation. The internal auditor should carefully review the physical count methods and make appropriate test counts while the actual inventory is being made. Substantial variations between the perpetual and the actual should be investigated. Under a well operated and carefully maintained stores system, it often will be found that the perpetual inventory is more accurate than the initial actual count.

There is unquestionably a need for internal audit control in every institution of higher education. The extent, however, is largely a matter of local determination dependent upon the size of the institution and the complexity of the financial and business operations.

Morale among the nonacademic employes at Wheaton College was greatly increased by the job evaluation analysis and the establishment of a consistent and regular wage scale for this group.

DURING THE ACADEMIC YEAR OF 1950-51 the business office of Wheaton College conducted a survey of all of the nonacademic functions of the school. This survey was made for the purpose of streamlining operations and effecting economies in all areas of the school's activities outside of actual classroom and faculty activities. That the project, conducted under the guidance of a firm of business consultants, was a success is proved by the fact that sizable savings have been effected in the operating budget.

One survey recommendation was the establishment of a consistent and regular wage scale for nonacademic employes. Like many other schools of its size and economic position, Wheaton College operates its own campus and a separate academy campus; we have 120 regular employes, not including part-time student labor. Our employes are not unionized and thus are not working under a formulated wage scale.

Because the existing wage structure had been the result of irregular and inconsistent growth down through the years, there were many areas of inequality and inequity. This condition existed not only between similar jobs in the same department but also between jobs of similar scope of responsibility in divergent departments. It was for the correction of these conditions that the survey was made.

The first step toward a revised wage scale was to develop a job description of each of the nonacademic positions in the college organization. After an educational program regarding the purpose and scope of the survey had been carried out, each nonacademic employe was given a questionnaire several pages long relating to the job he occupied. Instructions accompanying the questionnaire told the employe what was desired from him: a detailed statement as to the scope of the job, his responsibility to others, and the amount of training he felt necessary for proper performance of the job.

These questionnaires were supplemented by intimate knowledge of each



BRING WAGES INTO LINE...

HOWARD F. SMILEY

Assistant Business Manager
Wheaton College, Wheaton, Ill.

position, which was obtained from personal interviews, and they enabled the business office to reduce each of the 106 nonacademic positions to the desired job description form. The resulting job descriptions were of little value without a rating that would show the importance of one job over another, indicating its relative position on the proposed wage scale. The second step then was to place an evaluation on each job through the use of the job description.

USE JOB FACTOR RATING

In order to accomplish this step, it was necessary to choose an appropriate method of evaluation. It was decided to use the job factor rating method of job analysis. This meant that the factors for which the school was paying in each position, such as skill, education, working conditions, experience and the like, had to be chosen first, so that all factors would be included in the evaluation. Follow-

ing this, it became necessary to assign each factor an appropriate weight. For example, if the most important factor in a job was the physical ability to lift heavy loads, that would be given more points than, say, the experience factor for the same position.

After we had chosen the factors and assigned the percentages and prepared the resultant weighted point scale, the third step was to accomplish the actual evaluation. A committee was chosen for this purpose, consisting of the business manager, the assistant business manager, the director of food service, the superintendent of buildings and grounds, and the finance officer. This committee completely represented the departments with a large number of nonacademic workers. The group had sufficient knowledge, along with the job descriptions and questionnaires, to make the evaluation process objective and complete.

The process of evaluation was started by the jobs' being placed into two



...with job responsibilities and

with wages paid by neighboring colleges

main classifications—physical and non-physical—with each classification having its own factors and weighted point-rating scale. Meeting at set times, the committee read and discussed each job description, assigned the point rating for each factor to the job, and arrived at a total point rating for the position. This was done for all non-academic staff positions, thus bringing each position into the scope of a job description with a given numerical rating.

The fourth step was to place the positions on a scatter chart to give an indication of the existing wage scale. The chart immediately showed a buckshot pattern and its attendant irregularities and inconsistencies. Thus, it was necessary to accomplish the fifth step, that is, to define an appropriate number of labor groups with their respective wage ranges. This having been accomplished, the inequities as evidenced by those positions below the minimum of the various labor

groups were studied in the light of how much money would be required to bring the wages of these positions within the respective labor classes.

WAGE BASED ON POSITION

With the establishment of the labor groups and their respective wage ranges, and with the assignment of each individual nonacademic position to a class, the college now has a wage structure based on the position's merit and not on individual personality pressure. With each job description having assigned to it a particular wage range, it is possible for future employment to be made on a logical basis, and all increases in the future will be kept within the scope of the entire wage structure. Periodic reviews of each position are made possible by this wage scale organization.

However, there remained one more area to cover, and that was to get a cross section of what other schools in similar positions were paying their

Each nonacademic employee was asked for a detailed statement as to the scope of his job, his responsibility to others, and the amount of training he felt necessary for its proper performance.

employees in jobs corresponding to the job descriptions of Wheaton College. A representative of the college paid a personal visit to seven institutions within close radius to gain information from schools operating under a similar labor market and living conditions.

During the visit the representative would go over with the business manager each Wheaton College job description and when a job description found a close counterpart, the wage range for this position would be noted.

In addition to a job description comparison with these schools, there also were listed the additional benefits granted nonacademic employees, such as pensions, hospitalization and free tuition, inasmuch as these factors enter into the income picture. With all of this information compiled, a scatter chart of the averages of the jobs found to correspond to those at Wheaton College was made so as to indicate where our college might be out of line with the others. This survey has been most helpful. Because comparisons were made on a detailed job description basis, the wages paid by other schools can now be compared accurately with those we pay.

Wheaton College feels that it has much to gain from its new wage structure program, both by ironing out past inequities and in future consideration of merit increases. Wage and salary policies based on such scales are definite and workable. It will take some time to eradicate many of the inequities resulting from the old schedule of wages, inasmuch as there will be no reduction of wages to bring any one job which may be overpaid according to the new scale down into its proper labor group. However, existing inequities will gradually be eliminated, and eventually all classifications will be within the confines of the assigned labor groups.

The effect of this program has greatly increased the morale among nonacademic employees, who sometimes feel that they are second on the list of consideration for benefits received in the pay envelope.



1. New employees at Penn State are informed by a representative of the Security Benefits Division about the college's three plans: group life insurance, group hospital expense insurance, and state retirement system.



2. Check for hospital benefits, received two days after reporting hospital expenses, is welcome mail for this employee. The Security Benefits Division writes the check for the insurance company, thus assuring speedy payment.

SECURITY BENEFITS

are a well publicized part of

PENN STATE'S

PERSONNEL PROGRAM

which operates efficiently under guidance of

FRANK F. MORRIS

Director of Personnel Services
The Pennsylvania State College
State College, Pa.



4. Benefits to which a widow of a college employee is entitled are explained by a member of the division. She learns how the insurance company will pay her the \$5000 life insurance her husband carried in the group plan.



3. Correct hospital and surgical benefits are insured for employees at Penn State. Here John B. Butler of the Security Benefits Division reviews details of the plan with the administrator of a local hospital. The staff

of the division includes one man and three women (supervisor, personnel assistant, stenographer, clerk-typist). They are responsible for handling the memberships of 3600 full-time employees (academic and other) in the plans.



5. Planning to retire, this Penn State professor and his wife sit down with John B. Butler and learn about the details of the plan. Every employee planning to retire is entitled to this type of personal attention, just as every

beneficiary in the life insurance plan has a private interview, either at the office, or, if preferred, at home. The Security Benefits Division is just one of the five divisions in Penn State's department of personnel services.



B. P. BRODINSKY
Washington, D.C.

Many codes call for outer brick walls of 12 inch thickness when 8 inch walls would do today. At the left is pictured a full-scale burnout test conducted by the National Bureau of Standards. The data thus obtained provided much useful information on temperatures reached in actual fires. The results were correlated with laboratory tests and applied in developing code requirements. This test also showed the persistence of high temperatures in debris blanketed by fallen masonry.

Improvement in **BUILDING CODES**

will save college and university construction costs

TALK ABOUT BUILDING CODES AND you talk about dollars—educational construction dollars—and the health and welfare of college students.

Talk about building codes and you talk also about the most cussedly rigid social instrument that has appeared on the scene since Noah built his Ark of gopher wood, 300 cubits in length, 50 cubits in breadth, and 30 cubits in height—man's first building code.

Note that Noah got specifications for both materials and size. Had his instructions been merely to make an

ark strong enough to withstand the waters of the flood it would have been man's first "performance code," and the history of construction might have been different.

There are two ways to state how a building is to be made safe and wholesome for human use. One is to specify the exact materials that must be used, their sizes, and how they are to be put together.

For example, the "specifications" type of code may say: "All cast-iron or rolled-steel columns used for vertical

supports in the interior of a fireproof building shall be protected with not less than 4 inches of hard burned brickwork, concrete or other fireproof material."

Another way is to say what results you want and leave the details out. Example: "Iron or steel columns shall be protected by materials or assemblies having a fire resistive rating of four hours."

The first way is clear and definite, but it makes no allowance for new materials that might do a better job.

The second is clear and definite as far as it goes but throws no light on what materials and thicknesses are needed.

Most of today's 2200 local codes are of the first type, giving rigid specifications. The goal lies the other way. The four or five so-called model codes developed by national organizations claim to be of the second or performance type. But it isn't an either-or choice. New York State, for example, is developing a first-rate performance type of code for dwellings and public buildings. The experts agreed, however, that the performance code (a relatively thin pamphlet) will be accompanied by a manual (a good sized tome) giving specifications of materials and sizes to achieve the desired results!

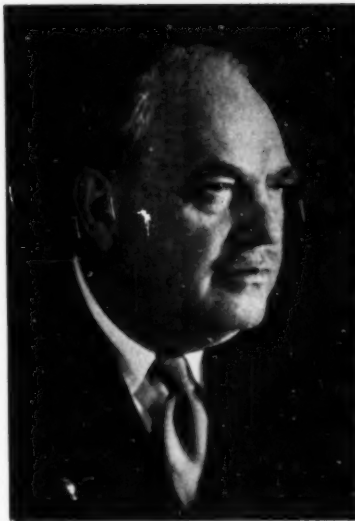
A COMPLICATED BUSINESS

But no community, state or educational group can ease its conscience by saying, "Let's adopt a performance type of code," and let it go at that. The meaning of building codes goes deep into the social fabric of our life.

In attempting to get behind the story of building codes I went to a sprawling establishment high on a Washington hill, the National Bureau of Standards. On the office shelves of Martin Goerl, one of the best informed men on codes in the country, were stacked a good portion of the existing codes in this country. I thumbed through many of them. The pages appeared dull, technical.

But in the words of George N. Thompson, another of the Bureau of Standards' top men on codes: "The contents of a code are something more than a routine statement of technical details. They are, or can be, a dynamic force in shaping the physical character of a community through the standards that are imposed. They are instruments for protection of safety, health, morals and general welfare for all of us who live in homes or study in colleges or universities."

The earliest codes were the first effective fire prevention laws in America. Whenever disaster struck—whether fire, explosion or building collapse—the people's attention turned to the building codes, and immediately they wrote in new restrictions or regulations to prevent similar disasters. Like many a peace treaty in man's history, codes were written to correct mistakes that had already happened. And they were mostly "don't" codes. A code based on prohibitions looks



Joseph P. Wolff is president of the Building Officials Conference of America, which is one of the big four code writing groups that have joined with the federal government to form the Joint Committee on Unification of Building Codes. The joint committee's goal is not to write the final answer in building codes but to refine concepts that should go into a code, simplify provisions, reduce the pressures of special interests, and hold forth a standard toward which the wise and the honest municipal official can work.

backward. Yet everything and everyone else concerned with construction look ahead.

* * *

There are three simple questions a college business officer should ask about his building code:

What is its age? The age of a code is a sign of quality. The building art moves forward every day. A code must keep up with it. Yet, one Minnesota community (Stillwater) reports a code adopted in 1886 still in existence—the oldest one known. Nearly half of today's codes are 20 or more years old. Some of these are frequently patched up with new amendments. However, amendments clutter up the code, making it difficult to understand and follow. The Bureau of Standards suggests that each community should overhaul its code every 10 years, and preferably at shorter intervals.

Are the code's contents clear and its regulations easily located? If a business officer wants to know the load a school roof is required to carry, the building or municipal official should be able to tell him swiftly, without hemming-and-hawing, and in clear terms. When building officials try to hide behind the "technicality of a code" the time has come to reexamine the entire code.

Is the underlying philosophy of the code one of fixed rigidity or flexibility? If the code contains a

great amount of minute and specific directions, if it rules out the use of new building materials, new standards and new ways of building, it will soon be outstripped by the times. On the other hand, if the code is expressed in terms of what is wanted in the way of strength, fire resistance, safety, there is a better chance for keeping the community's building abreast of changing conditions.

Most building codes today do not pass these three simple tests. Instead, we have today a bundle of local codes that are obsolescent, restrictive, rigid, frequently unsuited for the community's climate and needs, and abounding in cost padding requirements.

COST PADDING REQUIREMENTS

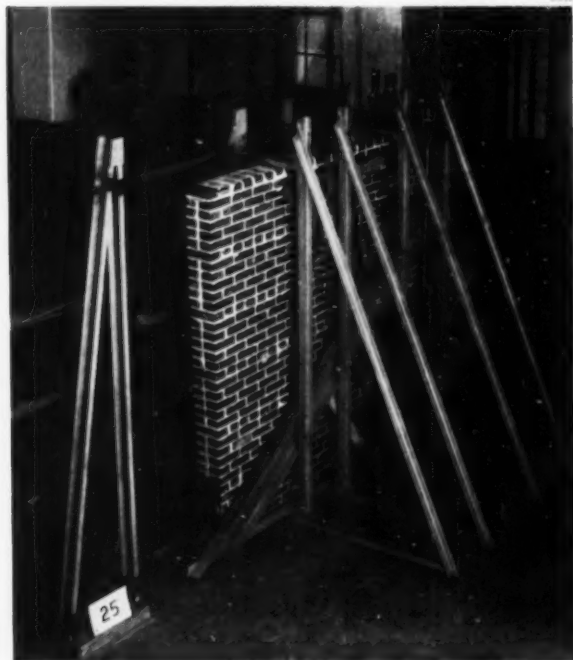
How did they get that way?

First, because they were handed down from community to community. Code writing is an exceedingly expensive undertaking. (Chicago recently spent \$100,000 merely to reword its code.) It's much simpler for a community to copy a code from some other city or town. This has proved costly to certain sections of the nation.

For example, a code written on the West Coast and adopted in a Midwest city would certainly penalize construction in the latter city. Such a code would have to carry the influences of the West Coast, provisions for vertical accelerations and other requirements



Above: Durability of materials must be considered as well as original strength. Masonry walls are exposed to weather to determine resistance of brick, tile, stucco and mortar over a period of years. Below: Walls, too, must be able to resist the shearing effect produced by high winds blowing on intersecting walls. N.B.S. laboratory simulates this effect by applying force at diagonally opposite corners of the walls.



that would not be necessary in the Midwest. Certainly a code written in New York City, when applied to a southern city, would add cost unnecessarily to college construction, as well as to all other construction. In the North a building has to be made strong enough to carry snow loads; in the South it is only essential that the wind loads for structural requirements be computed to obtain the needed safety.

The second reason for the chaos in our codes is that many of their regulations have been "recommended" by interests that had materials, labor or services to sell.

Joseph Reed, building code expert of the Housing and Home Finance Agency, says: "Early building codes were developed when the fire insurance industry and materials producers issued standards and recommended using particular materials in an approved construction manner. The municipalities grabbed them up because they couldn't hire an adequate staff to determine the quality of a material or design. So at this early stage the municipal government executed its governmental function by referring to the standards of the materials producers or the fire interests as the authoritative pattern."

Later came private organizations whose job it was to test the strength and workability of materials. In effect, these groups said: "When a building is constructed in this manner it meets with our approval." The municipal governments were glad to latch on to the suggestions—free for the taking.

Still later came the so-called private code writing groups, sponsored in many instances by fire insurance or other interests. More than half the municipalities in the United States have building codes obtained from some such organization. This means that an entire building code could be obtained from an outside source in a ready package and made local legislation simply by council adoption.

Those who had materials, labor or services to sell were ever on the alert when "model" codes were written or adopted.

Slide films prepared by the Housing and Home Finance Agency show that many codes call for outer brick walls of 12 inch thickness when 8 inch thickness would do today.

Other codes call for at least 8 inches of free wire at outlets for connections to fixtures. Six inches is ample, says the Housing and Home Finance

Agency, and electricians usually cut the wire off to this length anyway. However, multiply this waste by, say, 300 outlets in a building, and you have 100 feet of precious copper wire tossed on the scrap heap.

Many codes call for extra heavy pipe when a lighter pipe would be ample, and for intricate installations of stack and other plumbing fixtures when more simplified installation processes could serve.

In days when wood was the principal building material fear of conflagration was real and justified. This fear has impelled communities to adopt codes that today—in the age of steel and mortar—go far beyond safety requirements. Naturally, the fire insurance interests have supported the moves to build the greatest possible fire resistiveness into buildings.

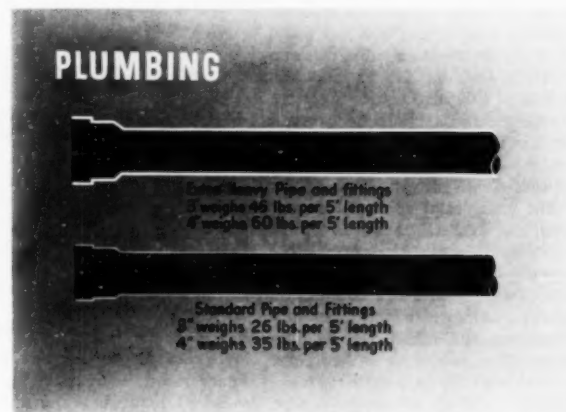
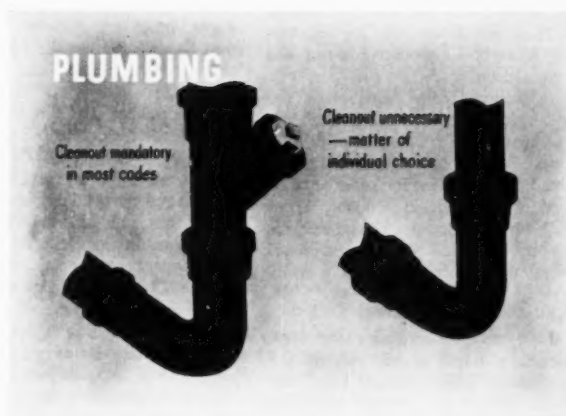
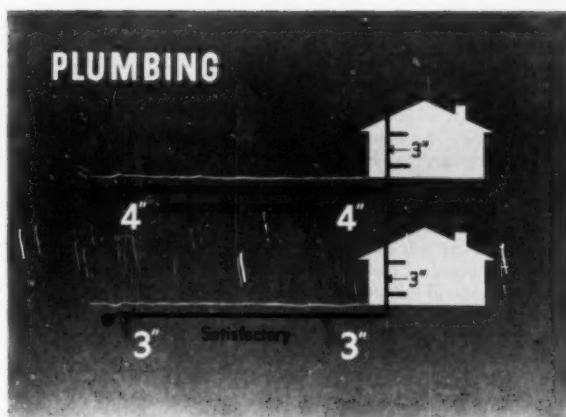
Today, these regulations are overcostly and overrestrictive. No college administrator wants to reduce the fire safety of the building. Nor is that necessary. Tests at the National Bureau of Standards prove that building materials today can offer fire protection without the cost padding practices called for in codes.

"One way by which school dollars can be saved is by reexamining the fire resisting code regulations," says a federal code authority. Here's a random example: The Pacific Coast uniform building code recommends that exterior walls must have a fire resistiveness ranging from two to four hours. Yet most local codes require a flat four-hour rating with no variations for interior or exterior walls. And it costs extra dollars to build more fire resistiveness in a wall.

Some building officials would go even farther. They claim that only hallways, stairways and exits need have four-hour ratings. For the rest of a building a rating of one to two hours is sufficient. But so far no one has been bold enough to suggest the cut to this reasonable level.

FEATHER-BEDDING

Organized labor has been accused of inserting into building codes feather-bedding provisions. Some of these charges may be true. But few government officials see much significance in this accusation. They say that labor's grip on the building codes has been exaggerated. Yet it exists. The most famous example of a feather-bedding requirement appears in Chicago's building codes. The plasterers' union had



Many codes call for extra heavy pipe and for intricate installation of stack and other plumbing fixtures when more simplified processes could serve. Similar waste comes from requirements of excessive free wire at electrical outlets and four-hour ratings for interior walls.

succeeded in writing in that "there shall be applied a coat or coats of lime, gypsum or cement plaster not less than 1/2 inch in thickness" on all walls—and such plaster is certainly not needed on many new types of wallboard.

The plasterers' union, however, found a unique justification. It claimed that a coat of plaster assures a "sanitation value" which it says can be obtained only by a "seamless unbroken continuous plaster surface." Although it has been proved that plaster can also crack and become the home of vermin, the provision still stands.

Rigid as most codes are, they are nonetheless giving way under the blows of many forces—technology and its new products; the defense effort and its need for mass construction; rising labor costs, and the slow painstaking work of researchers who are discovering what building materials can and cannot do.

In scattered communities—still too few—groups of men and women are looking critically at small-print volumes that describe the intricately complex building codes. Revision committees are at work in probably fewer than 100 communities throughout the country. Several state governments are at work rewriting building codes.

HOW A JOINT COMMITTEE

Four regional organizations have adopted so-called model codes and are continually revising them. Each code is the product of intensive study and testing with buildings and provides the nearest thing we have to a national standard. The groups are: the National Building Code of the National Board of Fire Underwriters, the Uniform Building Code of the Pacific Coast Building Officials Conference, the Southern Standard Building Code of the Southern Building Code Congress, and the Basic Code of the Building Officials Conference of America.

The codes of these four organizations still have wide differences. To reduce these as much as possible, the big four code writing groups have joined with several agencies of the federal government to form the Joint Committee on Unification of Building Codes. This committee will continue to be at work for months, if not years. So here is the top of the pyramid of groups concerned with building codes. The joint committee's goal is not to write the final answer in building codes. It is, rather, to refine the concepts that should go into a building

code, to simplify provisions, to reduce the pressures of special interests, to hold forth a standard toward which the wise and honest can work.

To return to the regional code writing groups—their work is important because we have in the United States sharp regional and climatic differences. In fact, a national building code is probably undesirable. M. L. Clement of the Southern Building Code Congress states that much wasted construction money can well be placed on the doorsteps of the advocates of a national building code.

SOUTH MAKES PROGRESS

Let us look more closely at the work of Mr. Clement's regional group. The Southern Building Code Congress has hammered out a code that has been adopted by about 250 cities and towns, from Norfolk, Va., to the Rio Grande Valley. (The Pacific Coast Building Code is in use by 550 jurisdictions, the National Board of Fire Underwriters' Code, by some 250, and the Building Officials Conference of America Code, by some 35 jurisdictions.)

The southern building code is of the performance type. "It will save general construction costs in the South up to 28 per cent over any other code," Director Clement says. He illustrates with the fact that the southern code permits the architect, designer or builder to take full advantage of new developments in wall partition, floor and roof assemblies. By the use of such assemblies the loads over the entire structure may be reduced—thus reducing costs.

Most old descriptive codes require that exterior walls shall be "of not less than 12 inches in thickness of solid masonry construction." The southern code permits, among others, "light steel framed brick veneer walls," (with 1 inch air space and 7/8 inch fire retardant board or plaster on the inside). Under actual test this building method gives the same fire resistive rating as a 12 inch brick wall but costs a fraction of the price of brick construction.

CAN'T AFFORD LUXURY OF WASTE

The impact of defense was mentioned earlier. The implication is obvious. Defense industries are taking large bites out of the civilian materials supply. The nation today cannot afford the luxury of wastage of materials frequently imposed by codes. In the words of Richard U. Ratcliff, research

director of the Housing and Home Finance Agency: "In the interests of national defense it has become necessary to modify the requirements of building codes or otherwise provide for the use of acceptable substitutes for critical materials. Local building departments should be flexible, so that emergency problems can be handled effectively within the present administrative framework of these local agencies without injuring their peacetime effectiveness."

All this means that the interests which have zealously protected the building codes are being jogged. It means also that the feeling is growing throughout the country that something can be done to modernize the building codes. In such a climate the college business official can move with effectiveness toward taking leadership for code revision. Here, specifically, are six things he can do.

WHAT COLLEGES CAN DO

1. Find out the facts about your own municipal and educational building code—its age, clarity of contents, and philosophy.

2. Get to know the local building officials who are responsible for administering the building code. Joseph H. Reed of the Housing and Home Finance Agency says that the big trouble with today's codes is not lack of technical data but lack of good administration. The college administration can support all efforts to strengthen the local municipal building department—which is, or should be, the sole authority for the administration of building codes.

3. Suggest to your local, state and national educational organizations that building codes be scheduled as a topic for discussion during meetings.

4. Become familiar with the work of your regional building code organizations.

5. By letter, talks and informal contacts, keep telling state authorities that college building regulations should keep abreast of latest developments in construction.

6. Write for a list of published materials on building regulations to the National Bureau of Standards, Washington 25, D.C. One of these publications, "Preparation and Revision of Building Codes" (15 cents), by George N. Thompson, should be in your files. It gives facts for use of local committees charged with preparing or revising building codes.

IN-SERVICE TRAINING

can lead to sounder purchasing

FORREST L. ABBOTT

Purchasing Agent and Superintendent of Operations
Teachers College, Columbia University

THE IMPROVEMENT AND PROFESSIONALIZATION of the purchasing activity in an institution of higher education require that provision be made for educational growth and development of purchasing personnel. Specific training for college business management or a phase thereof is not offered in the curriculum of any institution of higher education at the present time. Other devices accordingly have been utilized to further the educational training and development of those interested in purchasing as a profession.

The purchasing institutes for higher education that have been sponsored by the National Association of Educational Buyers, the COLLEGE AND UNIVERSITY BUSINESS and Northwestern University food service institutes, and the various workshops in college business management being offered by forward looking institutions, all are steps toward providing opportunities for such professional study and advancement. It remains, however, for the great bulk of the training for purchasing to be done on the job in our institutions.

The committee on education of the National Association of Educational Buyers, believing that in-service training programs offer one means of meeting this need, recently presented to the association membership "A Tentative Program for the In-Service Training of College and University Purchasing Personnel." An in-service training program for any phase of business management must be tailored to fit the needs of the specific function within the individual institution. Certain general principles and procedures, however, are applicable to most training needs.

The following is a summary of the operating principles and the training methods and aids suggested by the N.A.E.B. committee on education, which could be utilized in a training program for institutional purchasing personnel.

Recognition by top management will never be had for the mere asking. It must be merited. The basic strength of a department is determined by the capacities, abilities and attitudes of the personnel who comprise it. It is of prime importance that the administrative department head devote time and energy to the training of the personnel in his department. In-service training of employees is the planned direction of their learning activities. Carefully planned training activities will result in improved work habits, better employee morale, and improved operating practices and conditions, and will prepare employees for promotion and greater responsibility within and without their institution.

In-service training is essential (1) when a new employee must receive orientation and training in order to fit into the department; (2) when a new employee must receive direction in learning the details of his job; (3) when the initiation of new procedures or methods requires that employees be trained in their use; (4) when a high incidence of mistakes and errors calls for retraining to reestablish the proper practices, and (5) when turnovers in personnel, expansion of departmental activities, slackening of work, and certain emergencies, such as an increased flow of orders or an undue amount of sickness, create abnormal conditions.

OBJECTIVES OF TRAINING

Efficient development and operation of an in-service training program requires its definition in terms of general and specific objectives. These objectives should be formulated through discussion by those concerned with the training and in their final form should be used to test all subsequent steps in the development of the program.

The three commonly recognized training methods are: the informational,

the instructional, and the conference methods. They may be used singly or in combination, but it should be remembered that each is a different technique, each poses unique problems and requirements in a training program. Each is profitably applicable to certain types of training needs, relatively unprofitable for other problems.

Some form of the informational method may be used when employees who have had little experience are instructed, when there is a large group to be taught at one time, or when policies, methods and procedures are to be explained and put into operation immediately. It is essentially a pouring-in process and should be used only when there is not time to present the material in some other way. It may be in the form of a lecture, duplicated materials, motion pictures, filmstrips, slides, charts or drawings. Lectures can be especially effective in imparting selected information in a logical manner and in a minimum time. Permitting and encouraging a question and answer period following the lecture will add to its value.

The second general method, the instructional, is basically a "learning by doing" process under the leadership of an instructor. It involves either individual or group instruction. It may take the form of a demonstration, with the trainee or trainees being given an opportunity to try out the principle or operation demonstrated. It also may be a demonstration in which the employee watches the dramatization of a work situation, usually showing first the wrong way to attack a problem and then the right one. Considerable care should be taken to be sure that the demonstration does not degenerate into an amusing theatrical venture. Correct telephone usage, aspects of the purchase interview, public relations with

staff members, poor and good work practices, all lend themselves to the demonstration method.

The conference method involves a group of two or more individuals pooling ideas to solve collective and individual problems. This method has value in modifying thinking and attitudes and in extending practical knowledge through the experience of others. It recognizes and utilizes what the members of the group already know and serves to correct mistakes and misunderstandings. The well planned staff meeting falls in this category. In a well planned conference or staff meeting every phase of a problem is analyzed; facts are assembled and studied; pros and cons are considered, and advantages and disadvantages are discussed. This method is not suitable for the presentation of new material or with inexperienced groups that are not competent to discuss the problem.

TRAINING AIDS

It is a basic law of learning that one learns by doing. If it is not possible for the learner to participate directly in the problem, various teaching aids should be used so that the problem studied will closely approximate the experience the learner will eventually undergo. Some of the commoner and more helpful aids are: job sheets, case studies, handbooks, procedure outlines, and activity flow charts.

The job sheet is usually a breakdown of one job or operation into minute step-by-step acts. This breakdown is most valuable in teaching clerical operations, such as processing the vendor's invoice, processing incoming mail, pricing stores requisitions, and the like. This sheet should be given to the learner after the general phases of the job have been discussed and demonstrated, and it will become the learner's guide as he attempts to perform the job himself.

Case studies can be used to present a problem, to create interest in solving it, to determine and apply basic principles, and to develop attention to detail, careful inspection, and exercise of judgment. The studies come closer to the actual situation than a lecture or a discussion. Abstract principles are vitalized and given new and broader meaning and application.

The case may consist of a written problem followed by questions designed to promote discussion and bring out specific principles and prac-

tices, or it may be a written dialog that is presented to the group with interspersed questions and comments.

In preparing a case study certain criteria should be kept in mind. A case should emphasize essential points but not be too extreme. It will be more effective if it is practical and reasonable and if it is based on local job classification, processes and materials, and illustrates problems that are currently vital in the purchasing department.

Handbooks and procedure outlines are other aids. Employees should be given a complete written statement of all practices and policies that affect their jobs. The handbook or procedure outline must be kept current by the use of supplements.

A flow chart that indicates the movement of key purchasing forms is useful as a graphic instruction sheet. It serves as a source of information for the purchasing staff and for those whose duties bring them into contact with the purchasing process. It may clarify policies that have been expressed in general terms, define responsibilities, and ensure the flow of work according to the desired plan.

The material to be included in the training program usually can be prepared in outline form. The content should be chosen so as to improve the basic skills and knowledge essential to efficient purchasing. Large departments may prepare a supplementary outline covering the requirements for training buyers of specific commodities or services.

The preparation of such an outline requires an intimate knowledge of the institution, its structure, and its aims and objectives. It may be prepared in topical form to permit the selection of topics as needed. It should be usable as a basis for training individuals or groups, for training new employees or retraining old ones, or as a basis for discussion in meetings of the entire staff. For these reasons it must provide comprehensive coverage of both the major and minor problems of purchasing.

Among the general topics that should be included are the legal organization of the institution; administrative operating policies; organization for business and financial management; specific details of organization for purchasing; relationship of the purchasing department to other departments, and the development of essential purchasing principles, such as purchasing the proper quality and quantity, selecting

the best source of supply, and determining the proper cost; purchasing research; legal aspects of institutional purchasing; purchasing procedures; purchasing forms, and storeroom management and control.

The subject matter outline should list the reference material available to the department. This may be selected from the bibliographical material on educational purchasing compiled by the N.A.E.B. committee on bibliography on educational buying. However, much of the reference material will be in the form of institutional statutes, reports, pamphlets, booklets, manuals, letters of instruction, interoffice memos, and job sheets, which are available within the institution. A carefully prepared manual of departmental policies and procedures, departmental job sheets, and departmental activity flow charts are excellent reference materials. Such material may have to be specially prepared for certain aspects of the training program and should be brief but not at the expense of being clear. Illustrations and actual forms should be included freely.

TIME ELEMENT IN PROGRAM

Training should not be delayed until the need for it is imperative. Spur-of-the-moment training is likely to be poorly organized and relatively ineffective and inefficient. The program should be planned in advance, revised at least annually or whenever important new conditions arise, and put into effect on a planned basis. It will be necessary to decide whether the training will be conducted on college or employe time. Skill and technic training reflecting improved purchasing output should be given on college time. Background training of general benefit to the individual may be on his own time. Local conditions will determine the time of day the training should be given.

The in-service training activities should be evaluated periodically. In this way training activities most useful to the institution can be developed. Any evaluation will be only an estimate, but a survey of the relative rates of production, effectiveness of the operations, morale of the employees, and employe reaction to the training activities will contribute to its accuracy. Systematic review of the entire program will aid in the improvement of the departmental activities and will reflect the improved capacities, abilities and attitudes of the personnel.

W. T. MIDDLEBROOK

Business Vice President
University of Minnesota

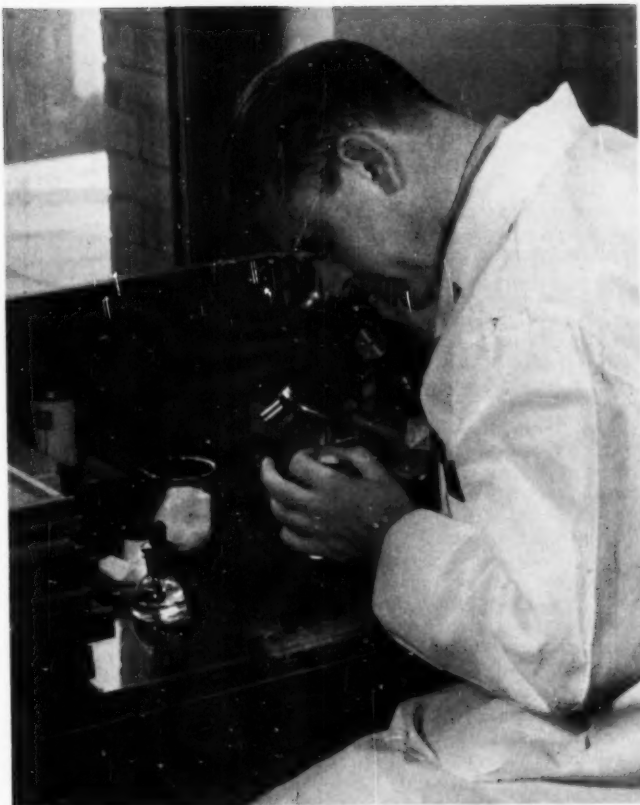
DURING THE LAST DECADE, PARTICULARLY in the second half, there has arisen in many of our institutions of higher education a problem of finance far-reaching in its effect and implications for the future. It's a problem that business officers have long recognized and have organized to solve. Some progress has been made by them but its ultimate solution can be expected only when it is understood by their colleagues and only when those colleagues help as a result of their understanding. Interestingly enough, their colleagues are the real parties at interest. "Those indirect costs in federal research contracts"—which are not paid—is the problem.

Questions arising include these: (1) Are indirect costs real? (2) Will failure to meet these indirect costs adversely affect our institutions? (3) Where lies the solution?

Are indirect costs real? The student in the classroom and laboratory requires a teacher. The research in the laboratory requires a researcher. Both the teacher and the researcher require supplies and in varying degrees equipment. The salary of these teachers and the researchers and the payments for supplies and equipment are the direct costs. Allotments for these items appear ordinarily in the college department budget. These apparent costs often are the only ones that the staff member wishes to recognize when an opportunity looms to expand his activities. He may vaguely appreciate that there are other costs but he somewhat resents them for they limit his activities.

The costs outside the classroom and laboratory not in the college department budget are the indirect costs of the institution. These costs are varied in character, significant in amount, include both capital and operating, and finally are very real. What are these indirect costs? A complete listing

From a paper presented at the annual meeting of the Engineering College Research Council of the American Society for Engineering Education, East Lansing, Mich., June 1951.



BRIEFING the SCIENTIST

on those indirect costs

of federal research contracts

would seem endless, but let's follow up a few.

The classroom and laboratory are part of a building involving an original capital investment in land as well as building. That building must be cleaned, repaired, lighted, heated, served with such other utilities as gas and water, and made accessible. This means roads, sidewalks, lawns, shrubs, heating and utility lines, a central heating

plant, a central supervisory office. In college finance these are physical plant costs. They are large; usually physical plant operating costs are more than half of the total indirect costs.

Then there are administrative costs that begin with the department office and move through the college office to the general administrative offices of the president, the regents, the business officer, the dean of students, the ad-

missions and records office, and others. The latter costs are known in our language as general administration costs.

Beyond physical plant and administration costs is another large group even more general in character, frequently referred to as general university costs. They include, among a multitude of others, library, storehouses, truck service, museums, insurance and retirement, central shops, and publications.

These three major groups of indirect costs are obviously real but are they significant? In my institution during the fiscal year July 1, 1949, to June 30, 1950, for every direct pay-roll dollar of direct cost these indirect costs required 45.8 cents. Keep in mind that pay-roll dollars are approximately 70 per cent of all institutional costs. Expressed in another way, for every dollar of direct costs, my institution spent 27 cents for indirect costs.

These indirect costs, as computed in the cost analysis made under the Armed Service Cost Manual, involve direct salaries and wages for education and research about as follows:

General University	5.74%
Including insurance	
(3.14) and retire-	
ment (1.30) and	
library (1.30)	
Administration	5.84
Physical Plant	33.90
Including direct op-	
erating costs (25.91),	
use of buildings	
(3.82), and use of	
equipment (4.17)	

45.48%

Will failure to meet these indirect costs adversely affect our institutions?

This question could be sharpened in this way. Will failure to meet substantially in full these indirect costs in federal research contracts adversely affect our institutions? The answer to this question rests upon the answer to another even more basic one, namely, is there a close, changing relationship between direct and indirect costs in our institutions? My own observation and experience covering nearly 30 years leads me to believe that beyond a certain fixed minimum of indirect costs the relationship is reasonably close.

Take the large physical plant costs as an illustration. Common sense and ordinary observation should tell us that the activities in a given building are

definitely limited and that beyond a given minimum building costs must vary with the activities undertaken. Too many have been deluded into thinking that there was not this close relationship because a shift can, and often does, occur in the balance between teaching, research and public service. This is not usually obvious to the staff member.

Under certain conditions only can the financial integrity of our institutions be unaffected if we accept federal research without full overhead. Financial integrity is of significance only as it is translated into academic integrity. Those conditions are these: (1) when, as Prof. Robnett of M.I.T. has aptly put it, there are idle hands and idle facilities—owing either to lowered or changed student enrollment patterns or lessened public service activities; (2) when the amount of such research is comparatively small in relation to all activities, or (3) when the amount is constant from year to year and has been gradually built into the operating picture.

SHORTSIGHTED POLICY

Under other conditions the indirect costs—unless recovered—must be and are subtracted from teaching or public service. This bleeding of teaching and public service resources saps the academic and financial integrity of the institution. It is a shortsighted and foolishly expedient policy for the federal government to force on the educational institutions. Perhaps you may doubt the ability of the government to force our institutions to accept such a policy. Short of a united front and short of an understanding of its implications by our staffs, it can be forced upon us. Administrations are fully aware of the mobility of our able staff members. Just a few strong and willing institutions can compel most of us to accept, for then acceptance becomes synonymous with keeping a competent staff.

The federal government negotiates its contracts with business firms differently. Both direct and indirect costs are fully recognized and to these costs are added profits. As nonprofit institutions we are only contending for our costs.

Where lies the solution?

First let me review the progress that has been made, for it is significant. During World War II the government for the first time outside of agriculture marshaled the applied re-

search resources of our educational institutions through the Office of Scientific Research and Development. The problem of indirect costs with this office was solved early. Growing out of this activity the government recognized the need of supporting more fundamental research upon which to build improved technology. The navy was among the first to support fundamental research. It was followed closely by the other armed services, the Public Health Service, and the Atomic Energy Commission.

When the educational business officers approached the late James Forrestal with the problem of indirect and direct costs they found a sympathetic and understanding listener. A two-year cooperative study with navy officials developed a document known as the "Blue Book" entitled "Explanation of Principles for Determination of Costs Under Government Research and Development Contracts With Educational Institutions." This document was later incorporated into the manual for all the armed services and now serves as a guide for all contracts. It is not a perfect document. It contains compromises and "offsets" but it has served for four years to determine full costs with reasonable accuracy and to authorize their payment.

NOTABLE PROGRESS

Business officers while still struggling with the problems of patent, publication and other clauses in the research contracts have reviewed this relationship with the armed services as notable progress.

Paragraph 7, page 3, of these principles provides:

"In determining the total cost of government research projects no distinction shall be made between 'fundamental' and 'applied' research. However, when the government by contract supports a research project of the type which the educational institution concerned might be expected to undertake as a part of its own educational and research program it might be appropriate for the institution to agree in the contract to sustain part of the cost of the project."

This provision is eminently proper, it seems to me, and has worked no hardship on any institution for it is not mandatory nor has it been invoked as a condition precedent. It is an invitation to share in costs presumably consonant with ability to do so.

The research contractual relationships with the armed services are reasonably satisfactory but they are not with the U.S. Atomic Energy Commission and the U.S. Public Health Service.

The January 1950 report of the A.E.C. on pages 150 and 151 states in part:

"The Atomic Energy Commission contracts for basic unclassified research in the university and college laboratories currently at an annual rate, for research in the physical sciences, of about \$6,500,000. These contracts are for two sorts of research:

"1. Basic research to solve a particular problem such as one dealing with reactor design or isotope separation. The commission seeks the services of specific scientists under these contracts and usually pays the full costs.

"2. Basic research of the typical university sort undertaken to add to the general fund of knowledge applicable to atomic energy development. The commission shares research cost of these projects to an extent arrived at by negotiation."

NOT PRACTICAL

In theory this sounds reasonable. In practice it has proved to business officers not to be. First, the commission decides whether the problem is particular (programmatic) or general (nonprogrammatic). There exists no feasible way to check the commission's classification. Second, there must be cost sharing if the project is classed as general, or nonprogrammatic. If an institution is unable or unwilling to share costs, the project goes elsewhere.

Now does any institution—meaning its responsible administrative officers charged with protecting its academic and financial integrity—have a free choice? It does not, for it must choose between accepting the project, assuming a share of the costs and thus satisfying the eager, able staff member, or

rejecting the project, avoiding the cost sharing, and thus perhaps losing the staff member. This impossible administration position is further complicated by the fact that these projects are constantly being applied for by staff members in amounts from \$10,000 to \$100,000 or more.

The situation with the Public Health Service at the present time is equally discouraging. At first no allowance for indirect costs was made in P.H.S. grants. Now 8 per cent of the total grant is allowed. At my institution, even allowing for the equipment left with the institution, this allowance provides for only about one-third of the total indirect costs. These grants, large in number and amount, are placing a heavy financial burden on limited resources. Yet, could our institutions refuse the research grants without seriously damaging internal and public relations?

Two business officers committees have been working jointly with these two agencies for a solution of the problem. One committee is the Inter-Business Officers Association Committee representing the five business officer associations of the country. The other is one appointed jointly by the Association of Land-Grant Colleges and Universities and the National Association of State Universities.

Some progress has been made with the Atomic Energy Commission but it has been so slow that there is grave danger of losing ground previously gained with the armed forces for both are part of the same government. It is the experience of our committees in negotiations with the U.S. Public Health Service which leads to the real answer to the question "Where lies the solution?"

After a number of meetings, representatives of the Public Health Service assured us of their understanding and willingness to join in supporting an upward revision of the present 8 per

cent allowance for indirect costs. To our chagrin and to their astonishment and embarrassment our representations for relief by an upping of the rate were unanimously rejected by the several advisory councils, the membership of which consisted of nearly one-third college and university people. The college representatives included presidents, deans and members of scientific staffs but did not include university business officers. Those university people involved apparently were not fully grounded in the financial implications of the problem. What reason was given for their refusal? The usual and obvious one—what is used for indirect costs is not available for the direct costs of the project—an answer plausible on first utterance but completely unsound from any fundamental long-time institutional point of view.

FEASIBLE SOLUTION

This experience points the way to the only solution that appears feasible if we can exclude, as we probably must, the possibility of a general financial windfall. We must first acquire a good understanding of the problem on our campuses. This understanding must include not alone presidents, deans, business officers, and department heads, but every staff member sufficiently able and distinguished to command the attention of these agencies in the granting of project funds. Our problem must be presented to all federal agencies by groups with representation from academic administration as well as business and from the scientific staff itself. Such a united front can succeed, for there are many important people in these federal agencies who are sympathetic and who do understand that failure to solve this problem in a reasonable manner will have a long-range adverse effect on the ability of our educational institutions to produce the sought-for research results.

Civil Defense . . .

. . . has received inadequate attention on the part of most college administrators. In the December issue W. P. Wetzel of Temple University will outline the civil defense program of his institution and the way it has been integrated with community plans.



Central Michigan College of Education builds a

PHYSICAL EDUCATION PLANT

THE 1949-50 SESSION OF THE MICHIGAN legislature appropriated \$1,182,125 to build a physical education building for Central Michigan College of Education, located in Mount Pleasant.

This new structure, which replaces a gymnasium that was built in 1906 to accommodate 350 students, will serve a student body of approximately 2400. Construction was started in the spring of 1950 and the building was completed last summer.

The new building is of fireproof construction with a steel skeleton and lightweight aggregate block and brick curtain walls. Walls in the gymnasiums and field house are painted block; corridor, pool and dressing room walls are ceramic tile; office and classroom walls are painted plaster. Corridor and dressing room floors are terrazzo; all other floors, except in the field house and gymnasiums, are asphalt tile. The building is heated by

steam from a central heating plant. Radiators of the convector type were used throughout. The roof is gypsum concrete poured over forms of cellular glass.

FUNCTIONAL BUILDING

For three years prior to the appropriation, the staff in the physical education department worked with the architect, Roger Allen and Associates of Grand Rapids, Mich., to design a functional building to meet the increased needs of the college. In planning the building it was necessary to provide facilities for the following purposes: (1) recreation and general physical education classes for 3000

students; (2) a department in health and physical education for major students, and (3) a varsity and freshman athletic program and intramurals.

Because of the Michigan climate a field house is essential. The area of the field house is 263½ by 139 feet. The floor is constructed of a 50-50 mixture of clay and screened cinders. This section of the building houses large classes in physical education, football practice in bad weather, early baseball drills, and varsity and freshman basketball.

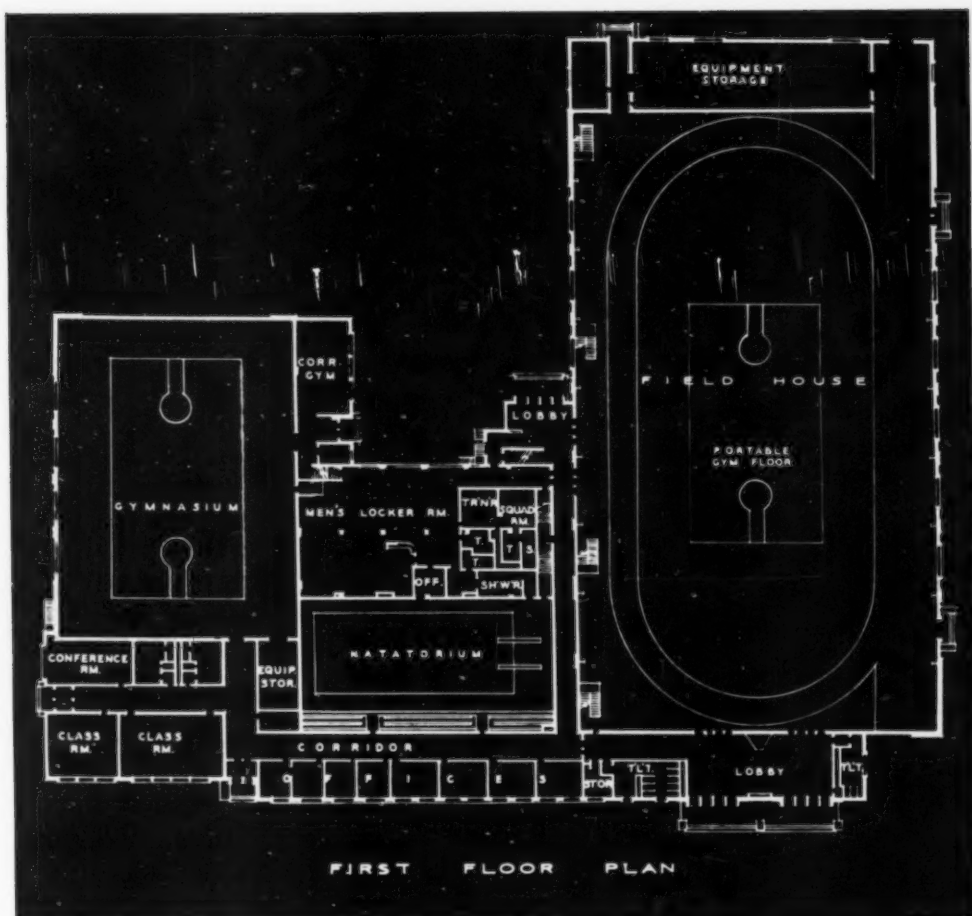
The new field house has a 10 lap-to-the-mile track with a 65 yard straightaway. An equipment storage room, 100 by 21½ feet, adjacent to the field house provides ample space to store the demountable basketball floor, temporary bleachers, hurdles and jumping standards. A balcony to seat 1200 people runs the length of the north side of the field house. It includes a modern press box. The bas-

R. W. FINCH

Health and Physical Education
Department Head

N. C. BOVEE

Controller
Central Michigan College of Education



ketball floor is the demountable type and there are temporary bleachers with a seating capacity of 4000.

The gymnasium, 120 by 90 feet, has an automatic partition to make two gymnasiums, 90 by 60 feet, for physical education classes. Folding bleachers come out of the north wall to provide seats for 1200.

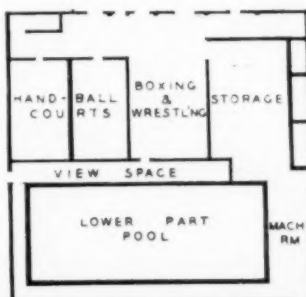
One large classroom, 39½ by 24 feet, and a small classroom, 26½ by 24 feet, are provided for courses in health and physical education. A conference room is provided for student conferences and for meetings of organizations within the department.

In addition to four small offices, 12½ by 13½ feet, there are four larger offices, 18½ by 13½ feet.

The men's locker room is located on the first floor and the women's locker room on the second floor. The post

Above: The first floor plan.

Below: Section beneath men's locker room showing handball courts, boxing and wrestling room, and large storage space.



office system of handling baskets will be used. Each locker room is equipped with 900 basket lockers. There are 175 lockers in each locker room, which will carry the peak load. A gymnasium store is provided in each locker room to store towels.

The men's locker room also includes a visiting team room. This will be used by the faculty during the week. There is a training room complete with training tables, diathermy, whirlpool and therapeutic lamps. There are two locker rooms for the teaching staff, each complete with shower, toilet and lockers.

Beneath the men's locker room are two four-wall handball courts, a wrestling and boxing room, and a large athletic equipment storage room. Included in the building contract were nine hard surface tennis courts.



SCHOOL . . . PRACTICE INN . . . CLUB

Statler Hall is serving all three purposes

STATLER HALL AT CORNELL UNIVERSITY no longer is just a showpiece and a curiosity; it is already an important part of campus life, serving the university in three ways: as the School of Hotel Administration, as a "practice inn," and as a faculty-staff club.

In the school section, the 376 students are learning the secrets of hotel operation. In its laboratories they investigate the mysteries of chemistry, accounting, engineering and other basic studies.

The faculty club has more than 1700 members and serves an average of 800 meals a day in the dining rooms, rathskeller and banquet hall. A club committee has a full program of activities for every day of the week—dances, bridge clubs, afternoon coffee hours, smorgasbord suppers. Members use the club for private parties or gather in the lounge after

classes for conversation with colleagues.

In this section, too, the students are learning, working as waiters, dishwashers, bartenders, cooks. Frequently a student is chosen to supervise a banquet. As part of a required orientation course, each new student works three hours a week at various jobs assigned to him. After finishing this course, students can apply for part-time work assistantships.

ALL ROOMS OFTEN OCCUPIED

The practice inn is busy—often its 36 rooms for guests of the school or out-of-town members are full. In the lobby, soft music from the public ad-

dress system makes a background as student desk men and bellmen care for the guests.

In 1922 Cornell introduced the teaching of hotel operation and administration on a scientific basis. The school is administered under the State College of Home Economics but operates on tuition income without state support. Before Statler Hall, classes were scattered over the campus.

The careful planning of the new building is largely the work of Prof. Howard B. Meek, who has headed the school since its beginning. The building was given by the Statler Foundation, established under the will of the late hotel executive, Ellsworth M.

ELEANOR BILLMYER

Office of Public Relations and Information
Cornell University, Ithaca, N.Y.

Statler. Architects were the Chicago firm of Holabird and Root and Burgee, whose work includes the Washington and Los Angeles Statlers, and the building is similar in many respects to the Washington hotel.

It is a modern, well landscaped structure of brick and limestone, in the heart of the campus. It is four stories high, 369 feet long and 114 feet deep, and cost \$2,550,000.

Inside, durable and easily cleaned terrazzo floors and tiled walls are used in the school section. Most of the furniture, draperies and carpets were designed especially for the building. The position of each piece of furniture was charted on 93 blueprints.

The school section occupies more than half of the building. Every part has been designed to make the process of learning as effective as possible.

Typical of this are the two large, pie-shaped lecture rooms, each seating 133. Eight quarter-circle rows of seats on a sloping floor give each student a clear view of the lecturer and his demonstrations. Seats are upholstered and comfortable. Ceilings are sound absorbent. Lights are recessed; dimmers can darken the rooms for movies.

The school section has four laboratories for hotel engineering; seven for accounting, food control, and statistics; two for office equipment studies; two for small quantity cooking, and others for secretarial studies, textile research, and large quantity cooking. There are 14 class and lecture rooms, offices for staff members, and storage rooms.

On the second floor in this section are a large carpeted auditorium that can be converted into a banquet hall for 500 persons, with an adjoining faculty lounge; a student cafeteria served by the main dining room; a student lounge with a small kitchen adjoining, and a library and study hall.

Offices for nonresident faculty members, experts who commute each week from New York or other cities, are on the fourth floor. These have sleeping facilities and private baths.

Near the center of the building is the inn lobby. The front office desk is like that in any modern hotel, with mail boxes, switchboard and public address paging system. The guest



Top: A section of the main dining room. Center: One of the 36 guest rooms. Bottom: Student chef in main kitchen.



KEY TO SECOND FLOOR PLAN

- | | | | | |
|---------------------|---|---------------------|---------------------|------------------------------|
| 201 Foyer | 213 Food Laboratory | 219 Food laboratory | 223 Student kitchen | 227-8-9 Private dining rooms |
| 202 Faculty lounge | 214 Food nutrition and chemistry laboratory | 220 Food laboratory | 224 Storage | 230 Lobby |
| 203 Auditorium | 215 Chemical storage | 221 Dining room | 225 Club kitchen | 231 Dining room |
| 204 Projection room | 216 Food storage | 222 Canopy | 226 Vestibule | |
| 205 Dishwashing | 217 Lecture room | | | |
| 206 Student lounge | 218 Corridor | | | |
| 207 Kitchen | | | | |
| 211-12 Offices | | | | |





Part of the men's lounge in the faculty club section of Statler Hall.

rooms are on the third and fourth floors, above the faculty club. A picture window in each room overlooks the campus and Cayuga's waters beyond. Each room has a private bath, full-length mirror, running ice water, service door, and four-channel built-in radio.

The carpeting in these rooms is cinnamon colored and the walls are either mocha or yellow. Some rooms are the conventional twin bed or double bed type; others are studio rooms with built-in beds. Another innovation is the bed light, built into the frame of a picture.

The club, leased by the faculty, occupies the basement and first two floors of the north wing. A men's lounge, card room, and browsing library on the first floor are carpeted in green, and the walls are cocoa color. The dark mahogany of the "restrained modern" furniture contrasts with the bright upholstery of red, dark green, cocoa or chartreuse leather; draperies of cocoa, chartreuse and green combine the dominant colors. Upholstered boxes of plants separate furniture groupings, and the card room can be shut off from the lounge by folding doors.

To the right of the lobby is the women's lounge and card room. Cloak

rooms and toilet areas also open off the lobby.

The main dining room, on the second floor, can serve 232 persons, or can be divided into smaller rooms by folding partitions or by rearranging the decorative plants. Here the carpeting is deep brown; one wall is papered in a predominantly green scenic design; other walls are paneled with a flexible walnut veneer. Chairs are upholstered in chartreuse leather, and the draperies combine the three colors. Each of the three private dining rooms and the breakfast room, near by, has its own color scheme.

The 5000 square foot kitchen and serving area on this floor serve the dining rooms (including dumb-waiter service to the rathskeller), the student cafeteria, and the banquet hall. Also, it is designed so that students can practice quantity cooking there or help the professional crew.

Because the kitchen is used for training as well as for production, some of the equipment is duplicated. For instance, there are two roast ovens, one electric and one gas, so that the students can compare their value.

The kitchen is divided into a dishwashing section, club kitchen, student

kitchen, banquet service section, banquet pantry, bakeshop, pantry, clean-up room, and bar.

The rathskeller has "modern rathskeller" furniture of oak and banquettes upholstered in green leather. Food from the main kitchen is dispensed from a cafeteria counter; this area has its own dishwashing equipment and a beverage service bar, as well as facilities for hot and cold food service, for short order cooking, and for making breakfasts.

Some of the rathskeller food comes from the near-by French kitchen, where students specializing in particularly fine cookery learn to make such delicacies as cherries flambeau, broiled squab, and steaks.

Also in the basement are an ice-making room and storage areas. Some sections as yet unused are earmarked for recreation, including bowling alleys, and laundry laboratory.

All food is received in the rear of the first floor and gets its first preparation there. There are a receiving platform for truck deliveries, a receiving room with a recessed scale, a clerk's office, storage refrigerators, butcher shop, and a section for preparing vegetables, as well as a garbage can washer.



Texas builds a **STUDENT HEALTH CENTER**

ROBERT LEON WHITE

Supervising Architect
University of Texas, Austin

THE NEW STUDENT HEALTH CENTER building on the University of Texas campus at Austin provides complete hospital and clinical service for the students. The ground floor houses kitchens, dining rooms, locker rooms, machinery and air conditioning equipment, the x-ray department, pharmacy, emergency room, and a physical therapy department.

The first floor houses all offices and examining rooms for doctors, clinic laboratories, business offices, and a special waiting room off the main lobby. Instead of one large waiting room, a number of smaller waiting rooms with outside light and ventilation are grouped into office suites.

The second and third floors are hospital floors designed to accommodate 84 beds for complete infirmary care. During epidemics the sunrooms can be used for additional beds. In the wings on these floors are the director's suite, library and conference room, special suite of offices and examining room, major operating room, fracture room, the central sterilizing room, and various auxiliary rooms.

The fourth floor houses men resident staff members, a sun deck for ambulatory patients, and large attic space for storage and repair of equipment.

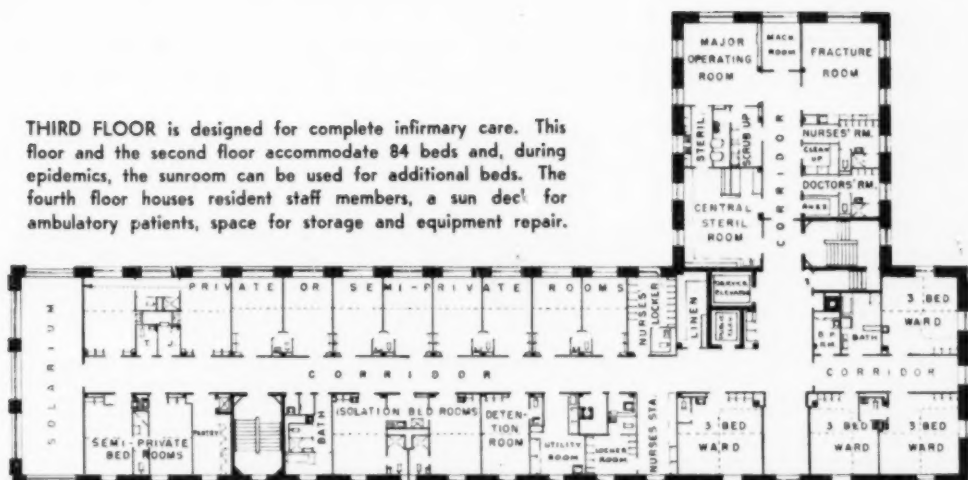
The building is located near the northern edge of the campus adjacent

to the women's residence halls and sorority groups, yet sufficiently close to the teaching units to allow visits to the clinic during a single class period. Its high location provides a beautiful view through the large picture windows in the bedrooms. The building fronts north on a prominent street, providing ready access for visitors. The principal entrances for students are from the west. Taking advantage of the sloping site, the ambulance and doctors' entrance and also the kitchen and service entrances are from the south on a lower floor, thus providing a desirable separation of public, student and service entrances and circulation.

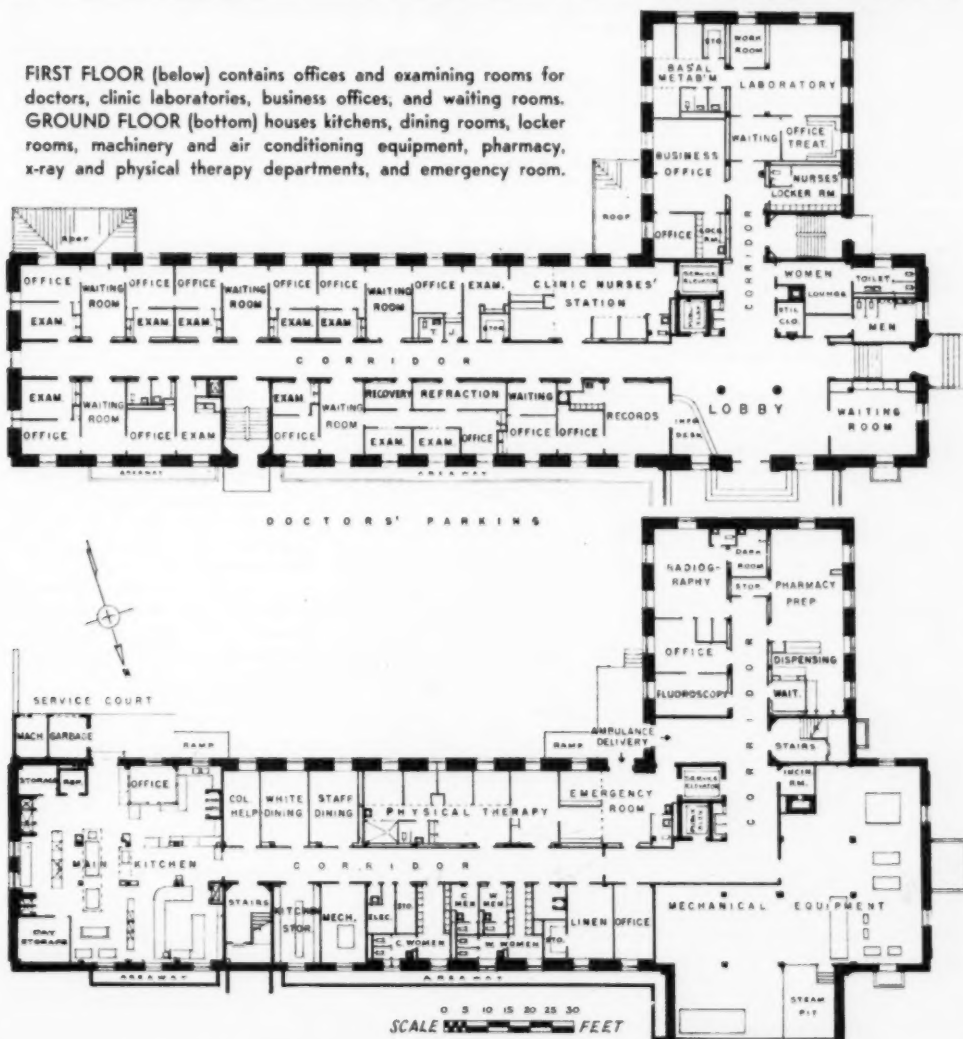
The exterior design of the building, faced with brick and stone with tile roof, is in keeping with the established architectural tradition of the campus, but its interior is of functional modern design.

Aside from a few items of special equipment previously owned, all furni-

THIRD FLOOR is designed for complete infirmary care. This floor and the second floor accommodate 84 beds and, during epidemics, the sunroom can be used for additional beds. The fourth floor houses resident staff members, a sun deck for ambulatory patients, space for storage and equipment repair.



FIRST FLOOR (below) contains offices and examining rooms for doctors, clinic laboratories, business offices, and waiting rooms. GROUND FLOOR (bottom) houses kitchens, dining rooms, locker rooms, machinery and air conditioning equipment, pharmacy, x-ray and physical therapy departments, and emergency room.



CONSTRUCTION DETAILS OF STUDENT HEALTH CENTER AT UNIVERSITY OF TEXAS

GENERAL: Foundations and superstructure, including pitched roof, reinforced concrete. Exterior walls, hollow tile faced with brick and Texas cream limestone, trimmed with stone. Interior partitions, hollow tile, metal lath and plaster, and glazed structural tile. Windows, steel double hung and casement types, picture windows between casements in bedrooms. Trim, window sills, base, door frames and casings, metal. Doors and cabinet work, birch, flush panel design.

FLOORING: Lobby, stairways, solarium and ground floor corridors, terrazzo. Corridors, offices, examining rooms, and similar areas on first floor; physical therapy, x-ray, pharmacy suites on ground floor; offices and similar use areas throughout the building, asphalt tile. Patients bedrooms, wards and corridors, jasper linoleum. Kitchen and related areas, quarry tile. Machinery room, cement. Emergency rooms, treatment rooms, toilet and bathrooms and similar areas, ceramic tile. Operating rooms, terrazzo floors with metal grids 4 to 6 inches on center grouted to carry off any static electricity.

WALLS: Corridors on ground and first floor, kitchen and related areas, glazed structural tile. Operating room suites, emergency room, treatment rooms, serving pantries, utility rooms, bedpan room, cleaners' closets, all toilet and bathrooms and similar areas, ceramic tile walls and/or wainscots. Lobby and related public areas, oak paneling. All other areas, plaster. Color schemes, pastel tints of blue, green and yellow, as recommended by color consultants; in most rooms or areas the wall color carries across ceiling.

CEILINGS: Kitchen and related areas, all corridors, lobby, record room, suspended acoustic tile. Library, acoustic plaster. All other rooms and areas, plaster direct on concrete slab or suspended to conceal pipe.

HEATING AND AIR CONDITIONING: Entire building air conditioned; 125 ton centrifugal compressor, 4160 volt, supplemented by conventional type fan and duct system for interior zone of first floor, and separate fan and duct system for operating suite designed to meet rigid operating requirements. All equipment with automatic thermostatic controls. All service conduits, piping and convectors concealed in furring. Separate exhaust system for kitchen and related areas, including enameled steel hood, carbon, filters, and air recovering equipment. Separate exhaust systems for inside toilets, bath, utility rooms. High pressure steam from central power plant in underground tunnel stepped down for heating, cooking and sterilizing.

CALL SYSTEMS: Fire alarm system, local manual system of the enclosed circuit, selective code type. Clock and program system, operated by relay from master clock and bell system of main campus. Nurses call system, doctors paging system, visual type with annunciators on the two hospital floors. Other call systems, ambulance door buzzer system, clinic nurses station, return call system in addition to PBX telephone system.

ELEVATORS: One service elevator large enough to accommodate hospital bed and attendants. One passenger elevator for public and general communication. Entrances on separate corridors. Both latest type push button, self-leveling.

LIGHTING: Power from central plant underground at 4160 volts to machinery room switchboard and distributed through air-cooled transformers located on each floor, 440 volts. Gas motor-generated emergency power unit in machinery room of 43.8 kva. to turn on automatically in case of current interruption, feeding service elevator, exit lights, corridors, operating suite. Recessed fluorescent lights in lobby; fluorescent lights in offices and examining rooms; incandescent lights in all other areas. Explosionproof switches and outlets in operating suite.

KITCHEN: Equipment, much of special design, mainly stainless metal, including several specially built reach-in type refrigerators. Tray service to hospital floors by dumb-waiter through serving pantries; if capacity requires, cart service to be provided.

COST: Contract price for new building, \$1,347,466.44, which includes: general contract, \$948,492; plumbing contract, \$107,444; heating, interior steam distribution and air conditioning contracts, \$208,673.12; electrical contract, \$63,866; refrigeration contract, \$8484; sterilizing and associated equipment contract, \$10,487.32. Cubage, 670,000, feet; cost per cubic foot, \$2.01, or \$22.46 per square foot, excluding architectural fees, land, and equipment. The sum of \$100,000 was appropriated for furniture, kitchen equipment, hospital and surgical equipment, and supplies not currently owned. A number of items, added during construction, together with original contract prices, architects' fees, landscape and paving, furniture, equipment and supplies, ran over-all cost of project to approximately \$1,600,000.



Clinical laboratory in the Student Health Center, University of Texas.

ture, equipment and supplies for the building are new, having been purchased with a special appropriation of \$100,000 for that purpose. Much equipment, such as the cabinets in the examining room, was especially designed and built in under the construction contracts.

Cost of the \$1,600,000 project will be financed in part by \$1,000,000 revenue bonds to be amortized by income from a student hospitalization fee of \$4 for each long semester and \$2 for each summer semester. The remainder will be paid from the university's general funds since the Student Health Service is considered a division of the university proper. The combining of the two functions into one building had long been desired.

Architects for the project were Harbeson, Hough, Livingston and Larson of Philadelphia, consulting architects for the university; Shirley Simons of Tyler, associate architect, and Robert Leon White, supervising architect.

WHAT COLLEGE FOOTBALL NEEDS



JIMMY EVANS

Sports Commentator

I DON'T THINK THERE IS ANYTHING basically wrong with intercollegiate football. The fault lies with those who sell the game to the public—the ones who have blown it up sky-high and overemphasized it—and that includes much of the press, which naturally is out to sell papers and does not lose sleep over what happens to players and coaches—and football.

Next time you see a coach persecuted in public, he will be a losing coach. Watch for it this season. Nobody ever sees anything wrong with the winning coach. The loser gets hit with everything, and then is thrown to the wolves. It's all part of the game and the public seems satisfied with the arrangement. The problems of football are not known widely, yet today we have the press screaming about the game, and we have all kinds of meetings to save the game. The game is okay.

Now that the patient is sick, the amateur doctors are running from all directions with wonder pills. It requires no wonder pills, just common sense.

Here is my five point plan.

1. Appoint a strong national commissioner of football, with money for a competent staff, and give him power to act. His staff would accept complaints from universities, not local petty ones but important troubles that threaten the game. When violations are proved, the commissioner would submit them to a board of appeals made up of college faculty men, who would have power to chastise or expel guilty schools. In other words, no more conference football for any of the rank offenders, and no buts about it.

The colleges that sincerely want to stay in line should be willing to finance this with some of their profits. The commissioner should not be a dictator but would act only with the approval of the board of appeals.

2. Eliminate all postseason games. These are purely commercial; there is too much pressure to win at all costs, and the players are the ones who suffer.

3. Have a special division in the commissioner's office for coaches, with

a strong outfit to investigate their complaints of being fired without cause and of being threatened by alumni and other groups if they don't win. Someone has to lose—it's a game. Keep it that way by protecting coaches from the wolves.

4. Control the alumni groups that form organizations to get funds for buying players. I recall the story of a high school star who wanted to go to Notre Dame. Two men came from a West Coast university and gave him \$10,000 in cash. The boy's father was sick and worked only two days a week, so the boy went to the West Coast school. This money didn't come from the university; it came from an alumni group that had an operating fund to buy players. Under my plan, Coach Frank Leahy—who told the authentic story—would have filed a factual complaint with the commissioner's office, and action would have been taken to throw that university out of intercollegiate football.

5. The university should take an actual interest in the players and help them get started later. As it is now, the kids are the suckers in the whole commercial deal. The universities should openly give them scholarships for room, board, books and tuition. Music students get scholarships, so do speech and dramatic students.

KEEP IT HEALTHY

If these things are done—and if some of the college men can talk for and about football truthfully, and not like a Hollywood movie or a headline-happy newspaper—college football will remain a game that pleases millions of people in a healthy way.

I think my plan is simple, and workable. It is a human treatment of the problem, not mechanical, not based on fear.

EVALUATE YOUR ATHLETICS

in the light of these N.C.A.A. suggestions

As presented by

"TUG" WILSON

Secretary-Treasurer
National Collegiate Athletic Association



RECENT DEVELOPMENTS in intercollegiate athletics, given wide attention by the press, have prompted the council of the National Collegiate Athletic Association to review the administration and conduct of the intercollegiate athletic program.

It is the conclusion of the council that there is nothing wrong with intercollegiate athletics that a release of the pressures upon it will not cure.

Experience over the years has amply demonstrated the value of wholesome intercollegiate athletics to the athlete and the educational pattern. An examination of the record will show that from the ranks of college athletes have come many of our finest citizens and leaders. No system that is not basically sound could produce such an end product.

Further, the council shares the widespread opinion that the moral tone of the nation has declined. The results of this slackening of moral tone are reported to us daily in the press. College athletes are but a cross section of our national citizenry, and it is not surprising that a few of them are affected by the lowered morals.

The sins of a nation are reflected in magnified proportions in the misdeeds of a comparatively few athletes. The challenge to educators, athletic administrators, and coaches is greater than ever before.

The N.C.A.A. council, in taking the first step to meet this challenge, recognizes that there are some weaknesses in the conduct of intercollegiate athletics. We are aware of and concerned with the growing trends that have brought certain sports unfavorably into the focus of public attention.

It is our conclusion that a release of certain pressures will effect a cure. Chief among the pressures that have

created the alarming trend of overemphasis is the insatiable demand of patrons for winning teams and the tendency to glorify unduly the capable athlete. The inevitable result of this unquenchable thirst is to prompt some institutions to live beyond their means, *i.e.* the undertaking of an athletic program that demands more athletes and more finances than are normally available to the institution.

Regardless of the origin of the pressures, those who have been responsible for the administration of athletics have been lax in not recognizing this trend and in not having the moral courage to halt it in its early stages. Late though it may be, it is incumbent upon them to assume that responsibility now.

It is fully recognized that the control of athletics rests primarily with the individual institutions or conferences. The council of the N.C.A.A. does feel, however, that it would be remiss in its obligation to member institutions if it did not point out some of the major factors that are contributing to the increasing pressures upon sports, and more particularly upon football and basketball.

OFFER SUGGESTIONS

We, therefore, urge careful evaluation of athletic programs in the light of the following suggestions, each of which, in our judgment, has a direct bearing upon the pressures that are intensifying emphasis upon athletics.

1. Confine practice seasons to the recognized season of the sport or limit and rigidly supervise out-of-season practice.

2. Limit the number of games in each sport, particularly football and basketball, either through curtailment of the season or definite game limitations.

3. Reexamine postseason games in the light of the pressures they create.

4. Urge reconsideration of the free substitution rule to eliminate pressure implications of the platoon system but preserve the protective health features of reasonable substitutions.

5. Insist upon normal academic progress toward a degree for purposes of eligibility.

6. Deny athletic eligibility to any student who has not been admitted in accordance with regular published entrance requirements.

7. Limit the number and amount of financial grants to athletes.

8. Enlist the support of all true lovers of wholesome college athletics, particularly in alumni areas, to reduce undesirable recruiting activity. This effort should be stimulated by top-level institutional administration.

9. Demand strict adherence to the letter and spirit of rules, once they have been established—either by institutions or by regional or national groups.

10. Inflict the penalty of ineligibility on the athlete who knowingly or wilfully enters into collusion for the purpose of receiving gifts or subsidy beyond that regularly permitted by the institution or conference of his choice.

11. Eliminate excessive entertainment of prospective athletes.

12. Give close attention to the athlete's curriculum to assure that he is not diverted from his educational objective.

We recognize the hazards of unilateral action, but submit that if the leaders of as few as two major conferences would take the lead and agree upon a positive corrective pattern, the result, nationwide, would be most salutary and might well be the salvation of the dignity of intercollegiate athletics.

We are convinced that the public now is sufficiently aroused to be willing to accept remedial action that would have been wholly unacceptable even as short a time as three years ago.

The time for platitudes is past. Our institutions and conferences must take aggressive action.

The foregoing statement was unanimously adopted by the full membership of the council of the National Collegiate Athletic Association at its meeting in Chicago, August 1951.

FACULTY CLUB

Has Buffet Service

SCOTT WILSON

Principal Food Service Manager
University of California, Berkeley

INCREASING FOOD COSTS AND RAPIDLY increasing labor costs were the principal factors that led Richard H. Neddersen, our residence halls supervisor, to suggest a buffet type of food service for the faculty club for men to replace the table service that had been a tradition there.

It was his hope and mine that such a service would provide the members more food for their money by reducing the work force, that it would simplify kitchen operation, that it would speed up service and permit more efficient use of the space available, and that it would simplify billing since a one-price menu was contemplated.

There were protests from some members that such a step would alter the whole atmosphere of the club and that attendance would drop, so caution prevailed and a temporary period was designated during the summer to try

the "experiment." This proved a wise decision as it gave us a relatively slack period in which to make our change.

Attractive chafing dishes, soup marmites, colored relish dishes and salad bowls were obtained, and the first buffet lunch was served in June 1950. A variety of relishes, such as carrot sticks, olives, pickles, celery sticks, and green onions, was offered and a choice of salads with cottage cheese and cold cuts as an alternate for the hot dish (of the spaghetti and meat sauce or lamb curry and rice type) in case a member did not care for the one hot entree offered in the chafing dish. A hot vegetable was displayed in a porce-

lain casserole dish. Desserts included small pieces of cake, dishes of fruit, cheese spread surrounded by a ring of crackers, and ice cream (if requested). Beverages (tea, coffee, milk and skim milk) were to be picked up from tables located around the walls in the dining room.

This type of lunch served for 75 cents scored a hit from the very start. It was popular with the members because of the speed of service, the variety of food, the attractiveness of the display, the availability of "seconds," and the low cost. All of these factors made the meal attractive to the regular customers as well as to the



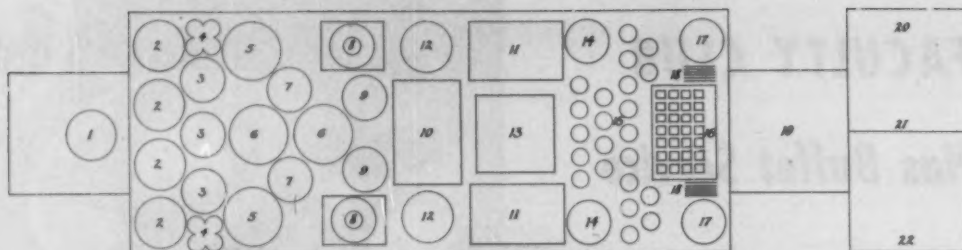
CHICKEN FRICASSEE AND DUMPLINGS

RICE AU GRATIN ENCASEROLE



CHOCOLATE NUT TOPPED JIFFY CAKE





1. Small table to hold pads of meal chits and bowl to deposit them.
2. Stacks of 10½ inch dinner plates.
3. Bowls of cottage cheese: dry curd, creamed and country style.
4. Compartment relish dishes. Filled with olives, pickles, celery, carrot sticks.
5. Large colored pottery bowls of tossed green salad.
6. Large pottery bowl of a second salad, such as coleslaw, potato salad, macaroni salad, carrot salad.
7. French dressing in sirup pitcher.
8. Jellied ring mold on tray, bowl of dressing in center. This is usually a fruit salad.
9. Bowls of beef pickles, pickled beans, corn relish, sliced cucumber in vinegar, or an additional salad.
10. Large stainless steel and copper chafing dish; has water bath heated by sterno. Hot entrees placed in this.
11. Trays of assorted breads.
12. Earthenware casseroles for vegetable.
13. Tray and assorted cold cuts.
14. Small tubs of butter chips on ice.
15. Individual servings of assorted canned fruits and puddings.
16. Tray of cake.
17. Stacks of plates for cake.
18. Extra knives, forks, spoons.
19. Small table to hold tray of wrapped silver: knife, fork, teaspoon rolled in linen napkin.
20. Tray of glasses of ice water.
21. Tray of milk: homogenized half pints, buttermilk, chocolate drink, skimmed milk plats.
22. Tray of empty glasses.

member with a friend or a large committee to entertain. Far from ruining the atmosphere of the club it imparted a festive air to the lunches, which the majority of the members enjoyed. We did, of course, make one concession to those members who had particular dietary wants by installing a small à la carte table in one corner of the dining room where the members who wanted only a hamburger and coffee or pie à la mode or crackers and cheese, or perhaps yogurt, corn flakes or prunes, could pick up these special items and pay just the à la carte price for them. Since a chit system of signing for the lunches either at the buffet table or at the à la carte table or at both, for that matter, is used, there was no delay or complication involved in the matter of charging the food to the right member.

The buffet lunch was a hit with those responsible for the management of the operation also. We found, as we had hoped, that less labor was used on both preparation and service. While we offered each member far more variety than he had ever enjoyed before, still our kitchen operation was greatly simplified because *all* of the variety was on the table rather than in the ice boxes in the kitchen. We also were delighted to discover that the members were careful of the food, serving themselves small portions of many different things, fortunately for us, with the emphasis on less expensive items, such as tossed salads and

relishes. The members and their guests felt free to come back for seconds and frequently did, but the privilege was not abused, with the emphasis again on an item we could afford—the coffee. The staff of student waiters shrank from 25 under table service to four bus boys taking care of the dirty dishes on the buffet lunch.

DINNERS NOW BUFFET STYLE

The lunches were such a success that they have been adopted as a permanent system of service and, in fact, dinner meals now are served buffet style as well. In the case of the evening meal we use a more suitable type of meat dish, such as roast beef, fried chicken, or baked ham, and the price is \$1.25. We serve soup every evening, although it is only occasionally served at lunch. We use only one buffet table at night instead of the two tables needed at noon. This gives us two lines at night and four at lunch, as the members go down both sides of the serving tables. Our average attendance at noon is 220 and at night 85. The evening meal is a time for special parties, and we offer table service, private dining rooms, and special menus at increased prices for those who want them.

To encourage members to use the club at night, we mail out the month's menus listing the meat only so that members can select the particular dish and night they like. We also feature foreign nights, such as Italian, Chinese,

Mexican, Armenian and Indian nights. This practice adds interest to the meals and attracts members partial to the seasonings and dishes of these countries.

The buffet has been equally popular at night and the attendance has enjoyed a steady growth since its inception. Many professors bring their families to these night meals because of their low cost and the fact that there is a reduced charge for children. No charge is made for children under 3 and the charge for children from 3 to 10 is 85 cents.

A similar type of service recently has been adopted by the women's faculty club with one interesting variation. This club is much smaller (attendance being about 50 for lunch and 30 for dinner) so it was decided to eliminate the food preparation from the kitchen and the food is brought by insulated cart from our central student cafeteria. Only enough personnel is employed to place the food on the buffet table and bus the dirty dishes. Here again the buffet service has proved a popular solution for the many problems caused by the small size of the operation, the need for variety even on this small scale, and the problem of increasing labor costs.

The success of this type of food service at our two faculty clubs has convinced us that the buffet table is an ideal way to serve small groups of adults with a wide variety of food in attractive fashion at low cost.



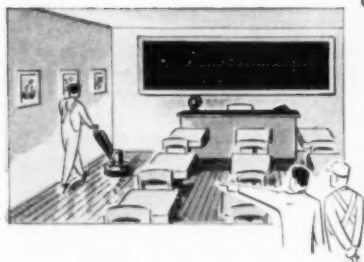
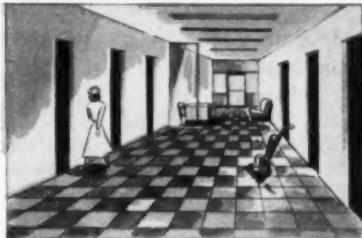
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to care for our floors!"*

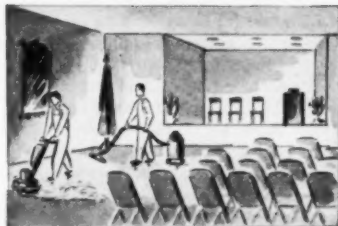
So I called . . . at other buildings and institutions to see how they maintained their floors . . . and I certainly learned a lot!



- My first stop was a hospital. Corridors gleamed and the superintendent showed me the reason. He keeps a quiet Clarke Floor Maintainer in constant use, steel-wooling and polishing floors. In the kitchen, the custodian was using a new Clarke Wet-Dry Vac and he showed me how completely and easily it picks up water, dust and dirt.



- Next I visited a school. The floors were being completely refinished. A Clarke Floor Maintainer was at work steel-wooling a freshly sealed maple classroom floor. In the gym a Clarke Sander was cutting off several years accumulated finish. The jobs these do . . . and the ease and speed with which they do them was a revelation.



- A church was my next stop. By this time I was looking for the Clarke name on all floor machines, but here they had only one Clarke and a machine of another make. Here again, I discovered something else about Clarke equipment. The custodian keeps a record of service and repair costs for both, and though the Clarke had run twice as many hours, its maintenance cost was much less.

It was the same wherever they were using Clarke equipment. Floors were in excellent condition, people were enthusiastic, and costs at a minimum. My recommendation to the Boss . . . and to you? Ask Clarke for a demonstration right away!

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NEWS

Athletic Subsidies Opposed . . . Decrease in Fall Enrollments . . . Cite

Need for More Steel . . . Housing Loans Approved . . . New U.M.T. Program

Proposed . . . Three Massachusetts Colleges Request Cooperative Library

Harvard, Yale and Princeton Oppose Athletic Subsidies

CAMBRIDGE, MASS.—Harvard, Yale and Princeton on October 28 issued through their presidents a statement reaffirming their joint policy of denying scholarships or special subsidies to athletes.

The essence of the joint policy is that athletes shall have the same opportunities for admission and financial assistance as other students.

"In all three colleges," the statement declared, "admission and financial aid for students are entirely under the control and administration of the proper college authorities—that is, the college admission and scholarship committees. No coach, alumnus or private individual has any authority over these matters.

"Each college has alumni clubs that raise money for scholarships, and each may nominate candidates for certain of them, but no one except the proper officer of the college can commit the college to student admission or financial aid."

At the three colleges all students engaging in freshmen and varsity football are required to report the sources of all income used to finance their college education. A student who accepts financial support from any source other than his college or an organization approved by the college or from personal or family sources becomes ineligible to compete.

"Misrepresentation of financial contributions is a basis not only for ineligibility," the statement declares, "but also for such other action as the college may consider appropriate."

The three colleges have a common date for notification of candidates as to their admission or rejection and for the announcement of scholarships. Their scholarship committees exchange

information regarding joint candidates for financial assistance.

Scholarship aid, the statement declares, is given only where there is clear evidence of financial need and is based also on judgments of relative promise as indicated by academic records and evidence of character and leadership. Scholarships are awarded annually; renewal is not automatic.

File Appeal for More Critical Materials

WASHINGTON, D.C.—On October 12, D.P.A. Administrator Manly Fleischmann announced that allocations of critical materials for schools, colleges and libraries will amount to 96,296 tons of steel, 3,897,000 pounds of copper, and 10,000 pounds of aluminum. This is approximately 50 per cent of the minimum requirements as determined by the U.S. Office of Education, claimant agency for educational institutions. On October 22, U.S.O.E. filed an appeal with the steel division of N.P.A., asking for an allocation of 192,000 tons of steel. The N.P.A. is reported to have agreed to announce a decision on the appeal within 10 days.

The allotments of steel and other critical materials for construction in the field of education will provide for the continuance of most approved construction schedules of the 2314 projects which are already under way in the fourth quarter of 1951.

Officials of the U.S. Office of Education stated that, as of October 1, there were 2293 pending applications for authorization to commence construction and for allocation of critical materials for which steel requirements total 166,500 tons. It will be possible to authorize construction for only a small fraction of these projects, according to Earl J. McGrath, U.S. Commissioner of Education.

Fall Enrollments of Full-Time Students Dip 5 to 30 per Cent

CINCINNATI.—Decreases ranging from 5 to 30 per cent in full-time student enrollments this fall as compared with a year ago have hit a large majority—82 per cent—of 466 of the country's approved universities and colleges reporting to Dr. Raymond Walters, president of the University of Cincinnati and veteran statistician of the collegiate field.

His analysis of the fall enrollment picture shows freshman attendances are likewise down in six out of every 10 institutions.

Dr. Walters announced October 16 the results of his annual October preliminary study of estimated attendances at institutions of all types. His detailed survey, now under way, will be reported in December.

Although 1951 declines are not as large as forecast earlier, they continue the drop from the postwar peak first felt two years ago on American campuses. In his analysis of attendance estimates submitted by types of institutions, Dr. Walters noted:

Of 466 institutions of all types reporting full-time enrollments, 82 per cent show decreases from last year of 5 to 30 per cent; 12 per cent show no change; 6 per cent show increases of less than 12 per cent.

Of 95 colleges for women only, 56 per cent report decreases; 30 per cent, no change; 14 per cent, small increases. Of 53 colleges for men only, 76 per cent report decreases; 11 per cent, no change; 13 per cent, small increases. Of 39 public institutions of all types, 96 per cent show decreases; 2 per cent, no change; 2 per cent, small increases. Of 22 private institutions large and small, 95 per cent report decreases; 5 per cent, no change; none, increases. Of 317 arts and sciences colleges,

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NEWS

77 per cent show decreases; 15 per cent, no change; 8 per cent, small increases. Of 26 technological colleges, 88 per cent report decreases; 4 per cent, no change; 8 per cent, small increases. Of 62 teachers colleges, 90 per cent report decreases; 8 per cent, no change; 2 per cent, small increases.

As to freshmen in the 466 institutions of all types, 61 per cent have decreases less heavy than for their total enrollments; 19 per cent show no change; 20 per cent, slight increases.

"Despite wide publicity as to the national need for engineers," Dr. Walters said, "the number of young men entering engineering schools and institutes of technology this fall is only a little larger than in 1950, when the total of engineering freshmen was about 27,000. In view of the industrial and scientific needs of the nation, there should at least be double that number."

In calling attention to the financial significance to higher educational institutions of this fall's shrinking student

bodies, Dr. Walters, noting the decreases are less heavy than anticipated six months ago, stated:

"However, since most private colleges and universities depend upon tuition fees for more than half of their budgets, the effect upon them of reduced tuition income is disastrous because of soaring expenses of operation."

Sees No Change Now in Student Deferment Plan

WASHINGTON, D.C. — Mrs. Anna Rosenberg, assistant secretary of the Department of Defense, was quoted in a news story appearing first in the *Chicago Tribune* of September 12 as having told a senatorial committee at a recent closed door session that she would ask Selective Service to "abolish student deferment next year."

In a special statement to the American Council on Education, Mrs. Rosenberg has denied any inclination toward asking for the abolition of the college student deferment program. She said: "In the light of current manpower requirements of the armed services, there is no prospect or plan for abolishing student deferment. It may be necessary, however, to decrease the number of such deferments next year (the academic year 1952-53). No change has been recommended to Selective Service that would affect the status of college students in any way during the current academic year (1951-52)."

N.P.A. Interprets Its Construction Regulations

WASHINGTON, D.C.—On October 17 the National Production Authority announced that the term "production equipment" in its construction regulations does not include office supplies and machinery, such as tables, desks, chairs, carpets, typewriters and other office machines.

N.P.A. said the action was taken because some applicants given allocations of controlled materials were using their priority ratings to obtain office equipment. Office supplies and machinery are neither production equipment nor production material, according to the N.P.A., so it is improper for holders of 4C construction allotments to use rated orders to obtain such supplies and machinery.

Notification of this interpretation of CMP 6 and Direction 1 to that



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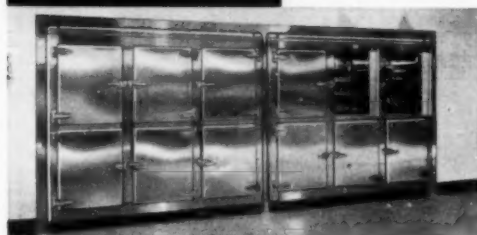
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In this year's nation-wide Food Service Contest sponsored by INSTITUTIONS Magazine, St. Vincent's Hospital in Toledo, Ohio, received a Grand Award for its excellent kitchen. This up-to-the-minute kitchen is typical of the hospital itself, whose eight floors house the very latest in modern medical equipment. • The Grand Award is also a worthy tribute to ten HERRICK *Stainless Steel* Refrigerators serving St. Vincent's new kitchen. By keeping foods fresh and wholesome, these HERRICKS play an important part in filling the dietary needs of St. Vincent's patients. You, too, will find HERRICK Refrigerators unmatched for complete food conditioning. Write today for the name of your nearest HERRICK supplier.

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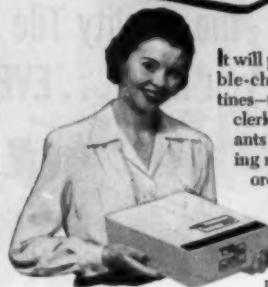


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Harvard Closes Its Geographic Institute

CAMBRIDGE, MASS.—Harvard's Institute of Geographic Exploration has been closed, owing to the decision of its patron, Dr. Alexander Hamilton Rice, New York explorer and Harvard alumnus, to withdraw his financial support. The explorer, member of the class

of 1898, has spent more than \$2,000,000 on the institute, including the erection of a \$400,000 brick and granite building, its equipment, maintenance and professional staff.

"The university has never contributed to the support of the institute in any way," President Conant declared. "The building and its contents, which were the gift of Dr. Rice, are the property of the university. The building will remain closed pending the decision as to its future use."

Higher Education's Need for More Steel Cited by Education

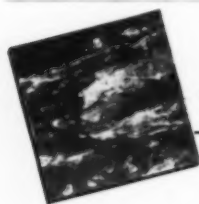
WASHINGTON, D.C.—Construction needs of higher education were considered at the October 18 session of the congressional subcommittee of the House Education and Labor Committee which is investigating the shortage of steel for school construction. Considerable interest on the part of Congressmen was evidenced, with more than 50 per cent of the membership of the House either appearing before the committee or submitting written statements describing the school situation in their districts.

Dr. J. L. Morrill, president of the University of Minnesota, spoke for the American Council on Education. He stated that the D.P.A. is not giving sufficient attention to education when balancing the needs and making allocations for nonmilitary uses of steel. He also contended that the proposed limitation by the N.P.A. on the amount of steel that can be allotted to institutions of higher education is not in the public interest.

Dr. Morrill recommended that the U.S. Office of Education retain full and complete responsibility not only for the determination of need but also for the division of steel and other material as is allocated to education. He pointed out that "discretion at this point is imperative and only professional educators who know the entire field of education should be entrusted with this responsibility."

Dr. S. M. Brownell, president of New Haven State Teachers College, speaking on behalf of the department of higher education of the National Education Association indicated that his organization was in accord with Dr. Morrill's remarks.

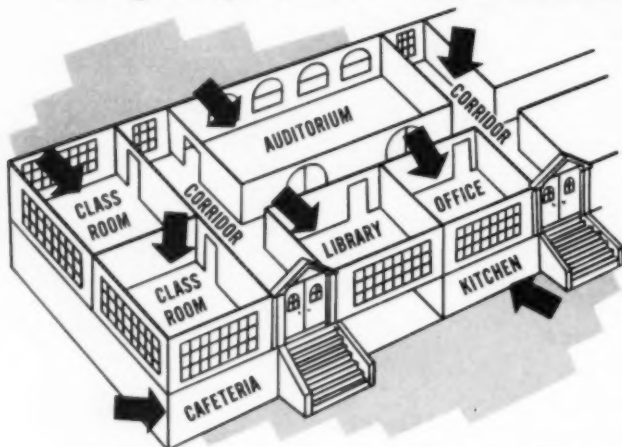
Congressman Thurston Morton of Kentucky stated that the solution to the steel shortage problem in the field of education was contingent upon three factors: (1) the distribution of steel for education should be the sole responsibility of the U.S. Office of Education; (2) there must be a sufficient allocation of steel to meet essential education needs, and (3) a system should be established whereby educational institutions can be assured of obtaining the steel once it has been allocated. It was stated that attempts to obtain the steel allocated was like



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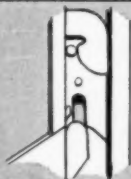
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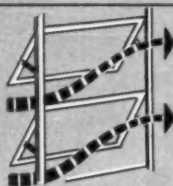
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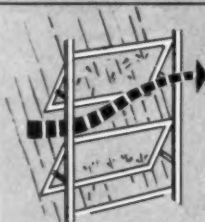
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"having a hunting license for a reservation in which there is no game."

The final session of the hearing was devoted to hearing the views of Manly Fleischmann, administrator of the Defense Production Administration and the National Production Authority. He pointed out that the total demands for steel for the last quarter of 1951 amounted to 220 per cent of the total national output and to 205 per cent for the first quarter of 1952. As a result, with few exceptions, every construction program has had to take some cutbacks for the 1952 first quarter, and no steel has been allocated at all for commercial construction during this period. Mr. Fleischmann stated that most of the commercial construction now being undertaken is using steel that had been obtained prior to the establishment of allocations on the open market.

In terms of the dollar value of steel, the U.S.O.E. has estimated that a total of \$1,604,000,000 of elementary and secondary school construction would be completed by the end of 1951. U.S.O.E. requests for steel for education for the first quarter of 1952

amounted to \$1,437,000,000. N.P.A. cut this amount by 22 per cent to \$1,150,000,000. Chairman Bailey of the congressional subcommittee pointed out that the 50 per cent cut in the tons of steel so allocated, from the requested 192,000 tons to 96,000 tons, did not appear to be consistent with the 22 per cent cut in the dollar value quoted by Mr. Fleischmann. With regard to colleges and universities, Mr. Fleischmann stated that he did not consider the possible six to nine months deferral in steel for these institutions as seriously endangering the educational system.

Many Fail Tests

WASHINGTON, D.C.—Thirty-seven per cent of the 339,000 students who took the Selective Service college qualification tests last spring and summer failed to make a score of 70 or better, according to a recent announcement by Maj. Gen. Lewis B. Hershey, director of Selective Service.

General Hershey stressed the importance of all eligible college students taking the next test, scheduled for December 13.

Get Approval for Big Housing Loans

WASHINGTON, D.C.—Six institutions of higher education have received approval from the Housing and Home Finance Agency for long-term low interest rate loans for construction of housing needed because of defense activities, according to a recent announcement by Raymond M. Foley, administrator of the agency.

Those receiving approval on loans include LaSalle College, Philadelphia; Knox College, Galesburg, Ill.; Rensselaer Polytechnic Institute, Troy, N.Y.; Illinois Institute of Technology, Chicago; University of Florida, Gainesville; Norwich University, Northfield, Vt., and Marquette University, Milwaukee.

These loans have been approved under Title IV of the Housing Act of 1950, for which President Truman released \$40,000,000 of the \$300,000,000 originally authorized by Congress, to be used solely for college housing construction to meet defense needs. Under the restricted program loans can be made for a maximum of 40 years at 2½ per cent interest. The government loans are made only when private financing on feasible terms is not available.

Embezzlement Charged

PEORIA, ILL.—The circuit court arraigned Jacob Lentz, former business manager of Bradley University, on eight indictments charging forgery and embezzlement in connection with a \$24,738 shortage at the university. He was released under a \$40,000 real estate bond until the time of trial.

Cooper Union Head Proposes 2 Year Speed-Up

NEW YORK.—President Edwin S. Burdell of Cooper Union has proposed to the union's trustees a four-year "middle school" period, supplanting the six years of junior and senior high school, to be followed by two years of preprofessional junior college education.

Following this, the student, at 18, would enter a year of military training, after which he would engage for four years in graduate and professional education. At the end of this period he would enter three years of profes-



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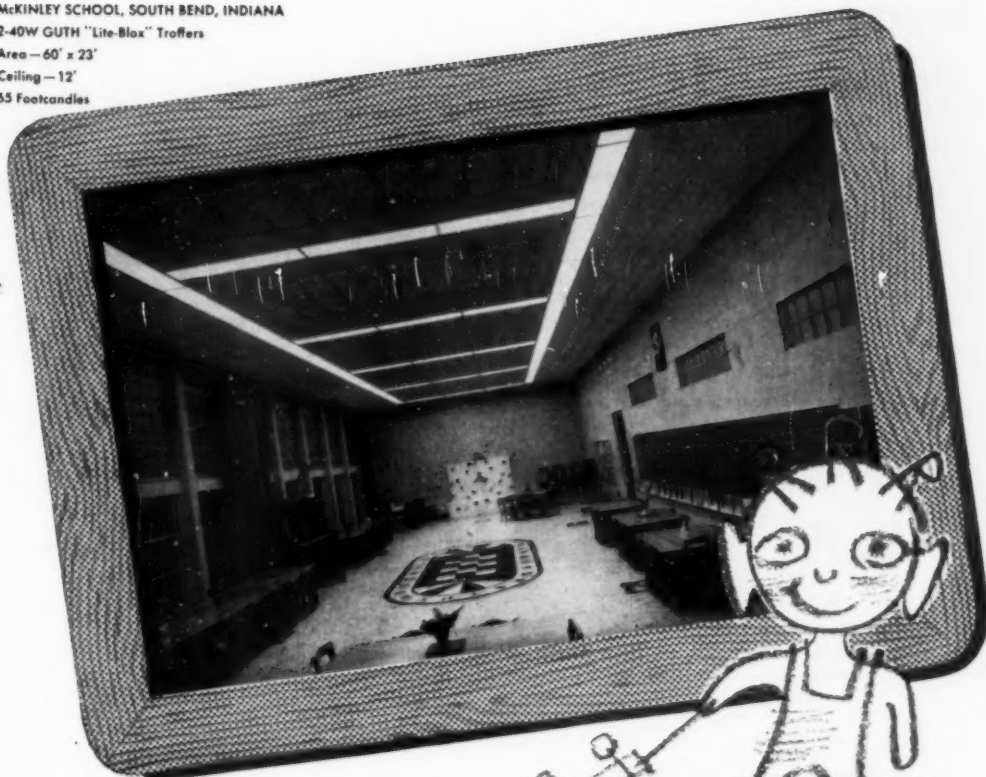
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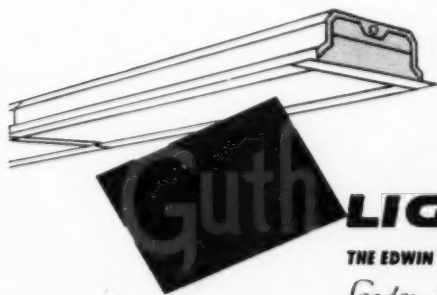
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NEWS.

sional internship so that at the age of 26 he would be ready to start his professional life.

Under the present setup, the average student begins his professional life at 28, while a proposed two years of military training would delay his start until the age of 30.

Three "sociological advantages" of this plan, Dr. Burdell stated, are: (1) the earning capacity necessary for marriage and parenthood would be possible at an earlier age than at present;

(2) the community would receive professional services sooner, and (3) the facilities for professional education would be less taxed.

Three Colleges Request Cooperative Library

SOUTH HADLEY, MASS.—Smith, Amherst and Mount Holyoke colleges have jointly made application to the commonwealth of Massachusetts to incorporate the Hampshire Inter-Library

Center, a nonprofit educational and research institution.

The Inter-Library Center is designed to release shelf space for current books and to help offset the drastic effects of rapidly rising costs of books and magazines, and to increase the amount of research material available to each of the three college faculties.

A cooperative venture which has been in the making for the last two years, the new Inter-Library Center is hoped to be one answer to the acute problem in storage space facing every university library in the country today. It will consist of a collection of infrequently used volumes put together by the three member colleges and will be housed for the present in Mount Holyoke's Williston Library in South Hadley.

Proposed U.M.T. Program Would Cut Draft Call

WASHINGTON, D.C.—The national commission appointed by Congress last June to outline a program for universal military training submitted its report October 29 calling for U.M.T. for 800,000 young men who have reached 18 years of age.

Dr. Karl T. Compton, acting chairman of the commission, stated that it was hoped that the program might be started in a limited way next summer. It is reported that the armed services had advised the commission that about 60,000 young men could be spared from the draft at that time for training in the new program.

The proposed U.M.T. program provides for a six months' period of training, with a stipulation that the trainee be a member of reserves for seven and one half years following his U.M.T. training. The trainee would not be subject to combat or military duty during the training period, and would be paid at the rate of \$30 a month. When the full program, covering 800,000 young men, is under way it is expected that the program would cost \$4,000,000,000 annually.

According to the proposal, each year 800,000 young men would be called for service. The quotas call for assigning 50 per cent to the army, 28 per cent to the navy and marines, and 22 per cent to the air force. The five-man commission, in submitting its report, estimated that the program could not be fully established for several

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years, because "every available man" is now required for extended active duty and for that reason qualified training officers are not now available.

Television Home Study Course Proves Popular

CLEVELAND.—College on Channel Five is proving to be a most successful educational innovation in Cleveland. The two courses for university credit that Western Reserve University started

on WEWS-TV recently have met with a response which, in the words of one university official, "has exceeded anything we expected."

Within 30 minutes following the opening telecourse lecture the switchboard at the university was jammed with calls by viewers who wanted to sign up. Applications for mailed lecture kits by those who wanted to get college credit by TV were received in such quantity at the deadline that the university registrar's office an-

nounced an emergency C.O.D. system of enrollment. Applicants virtually registered for the courses by paying the mailman when he delivered the kits.

By the end of the first week telecourse enrollment reached 386, coming in from a 70 mile radius of the city. Of this number 83 had registered for credit and paid the \$16 per credit hour fee while 303 came in on the non-credit basis by purchasing the syllabi at \$5 each.

The greatest percentage of the telecourse students are housewives and the course on introductory psychology has outpulled the one on comparative European literature.

Drop Loyalty Oath for U. of C. Faculty

SAN FRANCISCO.—The controversial "loyalty oath" required of University of California faculty and staff was rescinded on October 19 by action of the board of regents. The vote was 13 to 7 in favor of dropping the oath as a requirement for employment.

The repeal of the oath requirement was effective immediately, but it was not retroactive and will not automatically result in the rehiring of 18 faculty members dismissed since 1949 as nonsigners of the oath.

The regents indicated they still are determined to keep Communists off the campuses, but that the Levering Act, recently approved by the state legislature, would meet that requirement.

Long Island U Victor in Court Battle

OYSTER BAY, N.Y.—Long Island University last month won a four-year struggle over the right to hold classes in the building it bought here four years ago to use as a branch school of liberal arts.

A group of residents of the area had sought to prevent the use of the 123 acre former estate of Mrs. Marjorie Post Davies, wife of the former ambassador to the Soviet Union, Joseph E. Davies, as a university center.

The university purchased the estate in June 1947 and last year sold 50 of the original 173 acres for development. The battle between the university and the opposing residents was carried through various courts and town council and zoning meetings.



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Chancellor Kimpton Inaugurated at University of Chicago

CHICAGO.—A wealthy university is not necessarily good but a good university is always wealthy, Chancellor Lawrence A. Kimpton of the University of Chicago declared in his inaugural address here last month.

The occasion was given the full academic treatment in the university's

Rockefeller Memorial Chapel, with a procession of the university faculties and delegates from learned societies, educational organizations, colleges and universities, including a number of foreign representatives. In addition to Chancellor Kimpton, the academic audience and guests heard addresses by J. Wallace Sterling, president of Stanford University, and James Bryant Conant, president of Harvard.

Chancellor Kimpton warned that a university's obligation to be good was

frequently threatened by its need to be wealthy. Most universities have administrative officers who are euphemistically said to be in charge of "development" and whose actual function is fund raising, he pointed out. "The fund raising executive may be effective in bringing money and needs together," Dr. Kimpton said, "but in most situations it is members of the faculty—the men who are actually engaging in investigation and teaching—who must explain the university's needs for financial support."

This situation is a potential threat to freedom, the chancellor warned. "Money is often raised by saying the right things to the right people," he declared. "The truth may sometimes be the wrong thing to say. If we lose our purpose in the lust for money, we may become rich but we shall cease to be good. In times of tension, freedom of speech may become only freedom to say acceptable things."

With this threat to freedom always present, the university must never tire of explaining itself to the public, hoping for tolerant understanding, Chancellor Kimpton concluded. He said that experimentation in new techniques is a primary obligation of the private university. "The unusual is the commonplace in a great university," he stated, adding that the university administration may suggest and inspire but must never impose new ideas on the faculty.

In his tribute to the university and Chancellor Kimpton, President Conant said that the University of Chicago and Harvard were two "among only a handful" of institutions carrying forward the traditions that were characteristic of European universities before the war. The essence of the traditions is that the university is "a corporate body of scholars devoted to free inquiry," President Conant said.

Recalling the Great Remonstrance of 1641, in which a political party threatened to "reform and purge" the two great universities in England, which were charged with fostering subversive theological doctrines and philosophic thought at the time, President Conant said that many universities in the United States today are in precisely the same position—with the exception that it is economic and political subversion that is charged against them. "Critics of universities fail to understand the importance of



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NEWS.....

diversity of opinion among scholars," he declared.

Difficulties related to finance are a major threat to the independence of the university today, Dr. Conant stated. In addition to the necessity for raising money which makes some university administrators "publicists rather than scholars," he mentioned the growing concept that the day of endowments is gone and that universities must find support in hand-to-mouth grants for specific projects. Too often, he said,

such grants tempt the university to take on too many peripheral activities. Such activities thus become a threat to the university's independence.

President Sterling reviewed the development of our concepts of freedom of the press and freedom of speech and warned that abuses of these privileges and toleration of the abuses "bespeak a lack of discipline which is undermining our freedom." As a defender and critic of the free press and free speech, universities must be critical of

themselves as well as others, Dr. Sterling declared. He asked for university self-discipline to prevent abuse of the privileges of freedom. For example, the teacher's expertness in one field does not qualify him to make public statements in other fields, he stated. "Expertness in physics does not either guarantee or preclude expertness in economics," he warned.

Most entertaining moment of the inauguration ceremonies came when Laird Bell, University of Chicago board chairman, apologized to President Sterling for pirating Chancellor Kimpton from Stanford, where he had served as dean before returning to Chicago.

Most dramatic moment: Chancellor Kimpton conferring an honorary doctor of laws degree on Robert Maynard Hutchins, his predecessor, who served the university as president and chancellor for 22 years and is now associate director of the Ford Foundation. Chancellor Kimpton's citation of former Chancellor Hutchins was brief and eloquent: "Courageous and creative administrator of this university, great leader of education for freedom and responsibility, devoted worker for a just and peaceful world."

GIFTS AND BEQUESTS

• **University of Bridgeport**, Bridgeport, Conn., announced the receipt of six gifts from local industrial organizations amounting to a total of \$116,000. This is the first time in the history of the university that money has been received from concerns having only branch operations in the community.

• **Kalamazoo College** has raised \$575,000 in its current development program campaign to raise \$750,000. As an immediate benefit of the program, faculty salaries have been increased 7½ per cent and additions have been made to the scholarship and library funds of the college.

• **Meharry Medical College**, Nashville, Tenn., has received a \$2500 gift from the National Life and Accident Insurance Company of Nashville for the purpose of purchasing a posting and control system for patients' accounts with Hubbard Hospital.

• **Occidental College**, Los Angeles, received a bequest of approximately \$800,000 from the estate of Mrs. Mary W. Stewart of Pasadena, Calif., according to an announcement by Dr. Arthur G. Coons. The bequest was wholly unrestricted as to its use.

Something NEW has been added



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cleans
with
less labor
than ever

Floor-San® avoids soap scum

FLOOR-SAN has been improved so that no matter how hard the water you use may be, there is no soap scum or hard water curd formed. That means the "ring around the bath tub" and the film that dulls your floor or walls is banished. Floor-San now contains complete water hardness controls. There is no undesirable reaction with hard water. None of the cleaning power of Floor-San is lost. It's safe on any surface that will stand water . . . and it's a safe bet that Floor-San will save many cleaning dollars. Try it.



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☐ Yes, please send a free sample of Floor-San. ☐ Send Huntington Floor Maintenance Catalog. ☐ We're interested in Scientific Floor Sealing movie.

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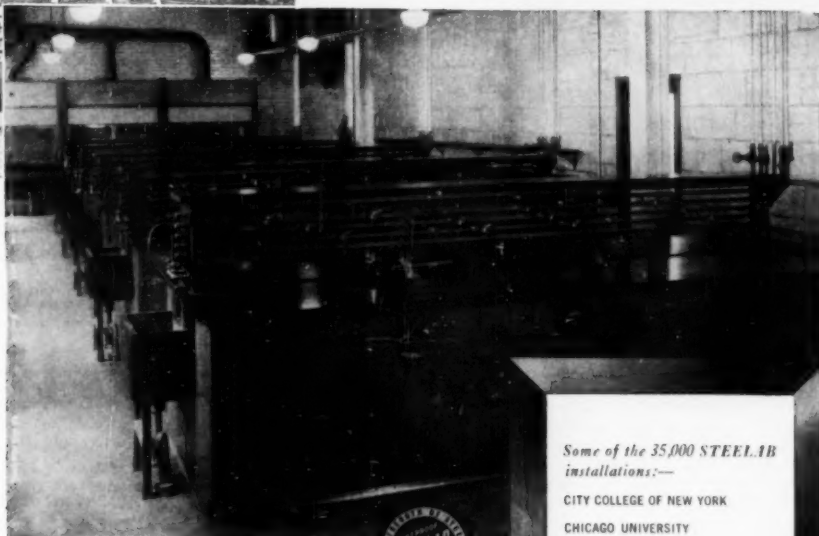
America's foremost institutions specify . . .



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"Wood is a distinct and potential fire hazard. Previous to 1928, many small fires occurred in our School of Science Building, resulting in considerable damage. In 1928, a small fire was discovered which could have been controlled except for a large concentration of wood furniture present. The fire swept through the laboratory, resulting in a total loss. Our new laboratory is now equipped with STEELAB furniture." *Excerpt from a letter by the Curator of a leading Men's University.*

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Creators and Manufacturers of STEELAB furniture
Old Country Road, Mineola, L. I., N. Y.

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M. I. T.
MINNESOTA UNIVERSITY
N. J. STATE COLLEGE AGRIC.
NORTH CAROLINA UNIVERSITY
PRINCETON
ROCKEFELLER INSTITUTE
SAN CARLOS, GUATEMALA
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MAIL ROOM
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Corbin Mail Handling Equipment and other
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Firm

Address

NEWS

NAMES IN THE NEWS

Harvey Sherer, former member of the national committee on preparation of a manual on college and university business administration, has been named assistant business manager of Oregon State College. He succeeds Jack Hunderup, assistant controller, who resigned to accept a position as assistant controller of the Continental Grain Corporation, with headquarters in New York City.



Harvey Sherer

Ralph Shumm, business manager at Pacific University, Forest Grove, Ore., has resigned to accept appointment as trust officer with the Commercial Na-

tional Bank of Hillsboro, Ore. Robert L. Wylie has been named to succeed Mr. Shumm at the university.

Dr. William W. Force, controller of Eastern Washington College of Education, Cheney, Wash., has been named bursar to succeed H. N. Stronach, who recently retired.

Alan W. McCarthy, campaign director of the Michigan Memorial-Phoenix Project, has been named director of development for the University of Michigan, according to a recent announcement by Harlan Hatcher, president of the university.

Dr. Francis H. Horn, dean of McCoy College and director of the summer session at Johns Hopkins University, has been appointed to the post of executive secretary of the department

DIRECTORY OF ASSOCIATIONS

National Federation of College and University Business Officer Associations

President: Jamie R. Anthony, Georgia Institute of Technology; vice president: James M. Miller, University of California, Berkeley; secretary-treasurer: Irwin K. French, Middlebury College.

Association of College and University Business Officers

President: Laurence R. Lunden, University of Minnesota; secretary-treasurer: C. C. De Long, University of Illinois.
Convention: April 20-22, 1952, Ohio State University, Columbus.

Eastern Association

President, D. L. Rhind, Massachusetts Institute of Technology; secretary-treasurer, Irwin K. French, Middlebury College.
Convention: Dec. 9-11, Chalfonte-Haddon Hall, Atlantic City, N.J.

Southern Association

President: Gladys Barger, Lenoir-Rhyne College; secretary-treasurer: Gerald D. Henderson, Vanderbilt University.

Western Association

President: Nelson Wahlstrom, University of Washington; secretary-treasurer: James M. Miller, University of California, Berkeley.

American Association

President: Glenwood E. Jones, Shaw University; secretary: L. H. Foster Jr., Tuskegee Institute.
Convention: May 1952, Howard University, Washington, D.C.

Association of College Unions

President: Frank Kuenzel, University of Michigan; secretary-treasurer: Edgar A. Whiting, Cornell University; editor of publication: Porter Butts, University of Wisconsin.
Convention: April 1952, Oklahoma A. & M. Union, Stillwater, Okla.

Association of Physical Plant Administrators of Universities and Colleges

President: Walter W. Kraft, University of Oklahoma; secretary-treasurer: A. F. Gallistel, University of Wisconsin.
Convention: May 1952, University of Michigan.

American College Public Relations Association

President: Stewart Harrel, University of Oklahoma; secretary-treasurer: James W. Armsey, Illinois Institute of Technology, Chicago.

College and University Personnel Association

President: Boynton S. Kaiser, University of California; secretary-treasurer: Ruth Harris, University of Illinois.

National Association of College Stores

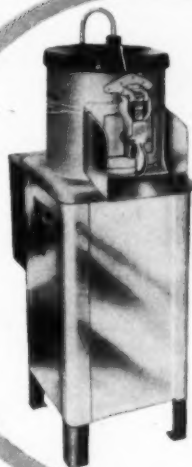
President: George Racine, Northwestern University; executive secretary: Russell Reynolds, Box 58, 33 West College Street, Oberlin, Ohio.
Convention: 1952, Miami.

National Association of Educational Buyers

President: Jamie R. Anthony, Georgia Institute of Technology; executive secretary: Bert C. Ahrens, 45 Astor Place, New York, N.Y.
Convention: May 1952, Washington, D.C.

Cut Your Kitchen Costs

with up-to-date TOLEDO machines



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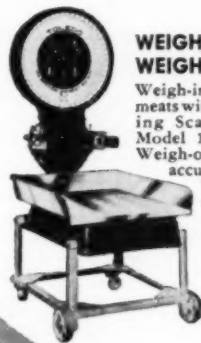
"DOUBLE-ACTION" PEELER

New Toledo Peeler for potatoes does a cleaner, faster job . . . with minimum of waste. Improved peel trap. Maximum adaptability to installation needs. Efficient Carborundum surfaces on *both* cylinder wall and disc. Choice of capacities—15, 30, 45 and 60 lb.—each peeling a full charge in 1 to 1 1/4 minutes.



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Toledo *Conveyor-Type* Dishwashers in full range of sizes and capacities. Automatic conveyor controls time of work for efficient dishwashing. Zip-Lok makes it easy to remove spray tubes for cleaning, without tools. Also available—*Door-Type* with 3-Way Door, opens front and both sides.



WEIGH IT IN WEIGH IT OUT

Weigh-in all produce and meats with Toledo Receiving Scales . . . Portable Model 1800 shown here. Weigh-out portions quickly, accurately with Toledo Speedweigh over-and-under scales.

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Choppers



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Write to . . . Toledo Scale Company, Toledo 1, Ohio

**TODAY IT'S
TOLEDO
ALL THE WAY!**

NEWS.....

of higher education of the National Education Association. He succeeds **Dr. Ralph W. McDonald**, who resigned to become president of Bowling Green University, Bowling Green, Ohio.

Paul Bacon, formerly a member of the staff of the school of engineering, University of Buffalo, has been named purchasing agent of the university. In another appointment, **Charles Balkin** was named chief accountant of the institution. He was formerly assistant to **J. Harvey Cain**, accounting officer of the board of higher education, New York City.

William Spoelhof, formerly of the department of history at Calvin College and Seminary, Grand Rapids, Mich., has been named president of the college.

Dr. Donald W. Gilbert, provost of the University of Rochester, has been promoted to vice president in charge of development as the first major step under the new administration of **President Cornelis W. de Kiewiet**. The office of university development is being established to obtain new capital resources for the university's educational and research work.

R/Adm. Alvin Duke Chandler, formerly director of naval logistics planning, has been named president of the College of William and Mary, Williamsburg, Va. He succeeds **Dr. John E. Pomfret**, who resigned September 13 under criticism for failing to act quickly during a recent scandal in the college department of athletics.

Dr. Wilson Compton, formerly president of Washington State College, has been named staff director of the advisory commission on information for the U.S. Department of State. The commission performs the dual function of evaluating and reporting to Congress on the progress of this country's overseas information program and advises the Secretary of State in his efforts to improve and strengthen the program.

Dr. Mira B. Wilson, principal of Northfield School for Girls, Northfield, Mass., will retire next June.

Albert Boynton Martin, a member of the University of Mississippi faculty,

has been appointed vice president of Florida State University at Tallahassee.

Ward L. Walhay, formerly senior purchasing assistant in the business office of the University of Illinois Chicago professional colleges, has been appointed assistant purchasing agent. He succeeds **Robert E. Ohlzen**, who resigned as assistant purchasing agent to accept a similar position with the board of education of Chicago. **Stafford Kariotis** has been appointed senior purchasing assistant and will be in charge of the purchase of food.

Dr. Charles E. Davis, superintendent of schools, Upper Sandusky, Ohio, has been elected to the presidency of Rio Grande College, Rio Grande, Ohio. He succeeds the **Rev. Floyd W. McDermott** as president of the Ohio institution.

Joseph Rozier, president emeritus of Fairmont State College in West Vir-

ginia, died recently at 81 years of age. He had been president of the college from 1943 to 1945.



Don Wheaton

Don Wheaton, financial vice president of Kenyon College, Gambier, Ohio, died suddenly on September 30. Mr. Wheaton was a former member of the editorial advisory board of **COLLEGE AND UNIVERSITY BUSINESS**.

Nelson Vance Russell, president of Carroll College, Waukesha, Wis., since 1946, died October 12 as the result of a heart attack. He was 56 years of age. From 1938 to 1946 he was professor of American history and chairman of the department of history and government at Carleton College, Northfield, Minn.

classified advertising

POSITIONS WANTED

Food Service Director—Now employed; 5 years' with well known university; thoroughly experienced menu planning, food and supplies purchasing, supervision all operations; chef; baker; age 40. Write Box CW65, COLLEGE AND UNIVERSITY BUSINESS.

Administrative—Now employed as manager of systems and methods division; for last 14 years with same company; considerable experience all phases of administration; desires permanent responsible position. Write Box CW68, COLLEGE AND UNIVERSITY BUSINESS.

Superintendent of Buildings and Grounds—Professional engineer with considerable experience, desires connection with university or college; will also teach engineering subjects; available immediately; eastern location preferred. Write Box CW 67, COLLEGE AND UNIVERSITY BUSINESS.

Architect—Seeks permanent position at highest capacity; with college or university; well qualified and experienced in this type service. Write Box CW 69, COLLEGE AND UNIVERSITY BUSINESS.

Superintendent of Buildings and Grounds—Well qualified; desire permanent position in east or on west coast; now employed in similar capacity in West; record on request. Write Box CW 70, COLLEGE AND UNIVERSITY BUSINESS.

POSITIONS OPEN

Graduate Engineer—With or without experience for position as assistant superintendent of buildings and grounds in a large eastern university; state full particulars and salary desired. Write Box CO54, COLLEGE AND UNIVERSITY BUSINESS.

Food Service Assistant—Professional school in Chicago requires food service assistant to operate 200 minimum dining hall; will be responsible for menu preparation, foodstuff requisitioning, and personnel; advise experience, age, salary requirement, when available. Write Box CO57, COLLEGE AND UNIVERSITY BUSINESS.

Bookstore Manager—Needed by large eastern university; position available immediately; send full information regarding education, experience and salary required. Write Box CO58, COLLEGE AND UNIVERSITY BUSINESS.

The rates for classified advertisements are: 10 cents a word; minimum charge, \$2.50.

Forms close 25th of month preceding date of issue.

Address replies to
COLLEGE AND UNIVERSITY BUSINESS
919 N. Michigan Avenue, Chicago 11, Ill.

**New-
all NEW**

two "Durapress" sherbets from LIBBEY GLASS

Smart **NEW** styling

Brand-**NEW** design

Appealing **NEW** contour



No. 5103
4-1/2 oz. sherbet



No. 5102
3-1/2 oz. sherbet

NEW heavy glass base

Modern **NEW** shape

YOU ASKED US FOR THEM and here they are—brand-new sherbets in the 3½-oz. and 4½-oz. sizes.

They're Libbey "Durapress" quality for strength and durability. They take high sterilization temperatures in stride. And the Libbey name means they're highest quality.

Desserts look more appetizing in sparkling

glass. Folks know desserts taste better, too, because glass gives absolute flavor protection—it's the only container that will not impart taste.

Make the desserts you serve more tempting—serve them in the new "Durapress" sherbet.

Get samples and prices of these brand-new sherbets from your near-by Libbey supplier or write direct to Libbey Glass, Toledo 1, Ohio.

LIBBEY GLASS "Durapress" Sherbets

ESTABLISHED 1818



LIBBEY GLASS, Division of Owens-Illinois Glass Company, Toledo 1, Ohio

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FIXED AND PORTABLE POSTS AND VELOUR-COVERED ROPES

69 Years of Manufacturing Equipment Designed
to Guide and Safeguard People and Property

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Rope
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SEND TODAY
FOR
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SAND URNS
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LAWRENCE METAL PRODUCTS

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Commemorating our 60th Anniversary

THE POWERS REGULATOR COMPANY

New Factory and General Office Building: 3400 Oakton Street, Skokie, Ill.

World's Most Modern Factory Producing Automatic Temperature and Humidity Control

... to meet the greatly increased demand for Powers products and
to give you better controls, better deliveries and better values
... these advantages are possible with our large new plant and modern
production facilities. With an enlarged engineering and production staff,

plus 60 years experience in heating, ventilat-
ing, air conditioning and process control,
we believe we can be of greater
service than ever before to
our many friends who have
contributed to our success



WILLIAM PENN POWERS

... with his invention of the first all pneumatic
system of temperature control and gradual acting
vapor disc thermostat made an invaluable contribu-
tion to the modern science of heating, air conditioning
and industrial process control.

Offices in Over 50 Cities. See Your Phone Book.



Monroe FOLDING TABLES

And Folding Chairs

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The Original
"No Knee
Interference"
Folding
Banquet Table

DIRECT PRICES TO
COLLEGES & SCHOOLS,
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Monroe Tables Designed and Manufactured Exclusively By

THE Monroe COMPANY

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"TELL-ALL"

Bulletin & Directory Boards
A Style And Size
For Every Need

Dav-Son Cork Back Bulletin Boards
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Dav-Son Changeable Letter
Directories For Lobby, Office
or Outdoor Use.

- Wide Variety of Styles and Sizes
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Choice of Several Colors
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Dav-Son Name Plates For
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• Choice of Matching Wood Bases
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*Is there no end to
this distracting noise?*

*Yes, a happy ending! We're
getting **FIBRETONE**[®]
acoustical ceilings!*



IMPORTANT! You can now get Fibretone Panels with flame-resistant finish. They meet requirements for slow-burning tests as per Federal Specification SSA-118a . . .



Fibretone Acoustical Panels are easily, quickly installed over new or existing construction.

THOUSANDS AND THOUSANDS of "noise traps" to help *end* harmful noise—that's the secret of Johns-Manville Fibretone Ceilings for classrooms, corridors, and all noise centers.

Each 12"-square unit of Fibretone contains hundreds of small cylindrical holes drilled in the sound-absorbing material. As sound waves strike the ceiling, they enter the holes where the sound energy is dissipated.

In a classroom 23' x 35', for instance, you'd have 389,620 of these ingenious *noise traps*, constantly functioning to trap and dissipate irritating, unnecessary noise.

Fibretone is attractively *pre-decorated*, can be painted and repainted, and is designed to meet the most modest budget. Available with flame-resistant finish if desired.

Other J-M Acoustical Ceilings include Transite[®], made of asbestos; and Sanacoustic[®], perforated *metal panels* backed up with a fireproof sound-absorbing material. For a prompt estimate, or free book on "Sound Control," write Johns-Manville, Box 290, New York 16, N. Y.

*Reg. U. S. Pat. Off.



Johns-Manville

J-M Acoustical Materials include Sanacoustic[®], Transite[®] Panels, and drilled Fibretone[®]

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Burroughs to speed
your accounting



Never before have educational institutions had the opportunity to mechanize their accounting at such moderate cost—because never before has there been a medium-priced machine so flexible and fast, so easy to operate, as the sensational new Burroughs Sensimatic.

This is the all-new, amazingly versatile figuring tool—the machine with a "mechanical brain" that directs it through every accounting job swiftly, easily, accurately. The Sensimatic makes possible the complete mechanization of all your record keeping work from a single machine.

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It's the Sensational
Burroughs Sensimatic
accounting machine

**Handles all These Jobs
and more**

Budgetary Accounting
Expenditure and Revenue
Distribution
Payrolls
General Ledger
Student Accounts
Cost Records
Stores Records

WHEREVER THERE'S BUSINESS THERE'S

Burroughs

WHAT'S NEW

November 1951

Edited by Bessie Covert

TO HELP you get more information quickly on the new products described in this section, we have provided the postage paid card opposite page 96. Just circle the key numbers on the card which correspond with the numbers at the close of each descriptive item in which you are interested. COLLEGE and UNIVERSITY BUSINESS will send your requests to the manufacturers. If you wish other product information, just write us and we shall make every effort to supply it.

All-Purpose Microfilm Unit



The Dual Film-a-Record is a new all-purpose microfilm machine which copies both sides of a document simultaneously or one side only on either 16 mm. or 35 mm. film. It is a fast hand or automatically fed unit which photographs up to 125 feet of paper records a minute. The Dual has specially designed feed rollers which automatically separate documents to prevent more than one from entering at one time. The extra large 15 inch throat permits savings in film through the ability to microfilm documents with printed areas up to 14½ inches wide, across the width of the film. Large sized documents can be copied on two sides at once using 35 mm. film.

The unit combines other operating features in addition to the special features mentioned above. It offers a choice of three reduction ratios, any one of which may be used simply by changing the lens in the permanently positioned camera. It is also possible to change from two to one-sided microfilming by the flick of a switch. The unit also permits the making of two identical copies simultaneously on duplicate rolls of 16 mm. film. All controls are centrally grouped and documents are returned after filming in the same order as they are fed. An automatic counter records the number of documents photographed. Remington Rand Inc., Dept. CUB, 315 Fourth Ave., New York 10. (Key No. 106)

Korweld Panel Construction

Korweld is a new panel construction for movable partitions. Korweld con-

struction incorporates (a non-metallic composition board of absolute, permanent flatness which is almost identical in appearance to Hauserman steel panels. With Korweld construction the partitions are 3 inches thick. Facing panels, of an extremely durable non-metallic material, are 3/16 inch thick. They are plastic welded to a honeycomb of impregnated paper, with a process developed by the Cycleweld Division of the Chrysler Corporation.

The new plastic-welded panels are sealed from within and without, eliminating the effects of moisture, and all panel edges are covered with metal to prevent chipping or cracking. The partitions have a warm, slightly textured finish when covered with two coats of baked enamel. The new movable partitions have all the advantages of interchangeability, ease and speed of erection, disassembly and re-erection. They are durable, mar-resistant, will withstand high pushing and pulling pressure and have high soundproofing qualities. E. F. Hauserman Co., Dept. CUB, 6800 Grant Ave., Cleveland 5, Ohio. (Key No. 107)

Germicidal Cleaner

A new liquid germicidal cleaner has been introduced that thoroughly cleanses while deodorizing and disinfecting the areas treated. It should be of particular interest for maintenance in colleges and the three-way action eliminates the need for more than one product to do the complete maintenance job.

Known as Korex Germicidal Cleaner, the product is a unique compound combining soap, a synthetic detergent, a germicide, a wetting agent and penetrant with water softeners and emulsifiers. It is unaffected by water hardness, cuts through dirt, breaks it down and floats it away in one application. With a phenol coefficient of 2, its germicidal properties are effective against many bacteria. It is highly concentrated and diluted up to 40 to 1 with water before using. It has been proved effective, through extensive testing, on all types of floors and on furniture, woodwork, walls, hard goods furnishings, leather and metal. It is said to be safe on any surface unharmed by water and not to irritate human skin. Huntington Laboratories, Inc., Dept. CUB, Huntington, Ind. (Key No. 108)

Odor Dispersing Lamp

Odors are dissipated through a triple output of ozone-inducing radiations with the new small lamp bulb recently introduced. The ozone replaces unpleasant odors with clean, fresh air. The new "Odorout" bulb changes odor molecules in air instantly as ultraviolet radiations of special wavelength transform the oxygen around the lamp into ozone, an air purifier. The 3½ watt, small sized lamp is designed to be burned in a special wall fixture. The bulb is said to last for six months when operated 24 hours a day. Westinghouse Electric Corp., Lamp Division, Dept. CUB, Bloomfield, N.J. (Key No. 109)

Folding Table

"Off-center pedestal legs" are the feature of the new folding banquet table for institutional use. They afford the maximum of leg room and allow tables to be stacked in the minimum of space. The Midtex or plywood tops are attractive in appearance, designed for rugged use and are laminated to heavy plywood framework. No screws or rivets in the top gives a smooth surface and makes the tables easy to clean and keep clean.

The recessed steel apron of the table is formed for maximum strength and durability. The legs fold within the framework for easy, convenient stacking. Sufficient leg room is allowed since the legs are recessed from the ends of the table. The Midwest standard "Du-Honey-20" automatic legs lock legs in both folded and extended positions. The tables are available in 30 inch widths in 60, 72 and 96 inch lengths and in 36 inch widths in 72 and 96 inch lengths. All tables have a standard height of 29½ inches. Tops are available in tem-



pered Midtex, plywood, Formica and linoleum. Midwest Folding Products Co., Dept. CUB, Roselle, Ill. (Key No. 110)

Continued on page 78

REALOCK FENCE

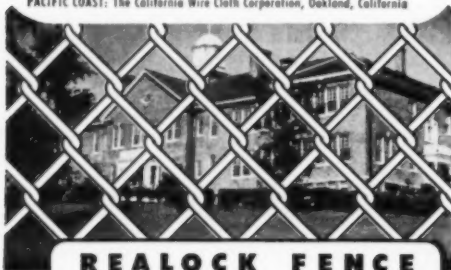
means what it says

Realock Fence provides real locked-in protection for your grounds and property. All fittings have bolts placed so that nuts are removable only from the inside...thereby insuring safety from intruders.

Realock Fence is heavily galvanized by a special process...gives weather-resistant, durable service year after year with little or no expense for maintenance. Expert erection service is conveniently available.

For additional information write our nearest sales office or consult your classified telephone directory.

EAST: Wickwire Spencer Steel Division, Buffalo, New York
WEST: The Colorado Fuel & Iron Corporation, Denver, Colorado
PACIFIC COAST: The California Wire Cloth Corporation, Oakland, California



REALOCK FENCE

THE COLORADO FUEL AND IRON CORPORATION

BRANCHES IN ALL KEY CITIES



Checkers

PORTABLE STEEL COAT RACKS



Set up in a few minutes anywhere, without bolts, nuts or tools, these light, strong rigid racks provide a 4 ft. bar for coat hangers and 2 ventilated hat shelves.

Answers the "wraps problem" for classrooms, school cafeterias, PTA meetings etc. Ideal for shop coats, for drying athletic gear or storing academic robes, band uniforms etc. (with shelf assembled in top position, bar will take longest garment bags.)

Sturdy, rigid in use, these racks will stand up for years as permanent installations or can be quickly disassembled and stored in small space... always available for emergency use. They are strongly built of heavy gauge steel, electrically welded. (when specified—18 double hooks will be provided that snap over hanger bar to accommodate 32 coats or laboratory aprons).

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624 So. Michigan Ave., Chicago 5, Ill.

PETERSON... OUTSTANDING IN THE FIELD OF SCHOOL FURNITURE

LABORATORY
LIBRARY
VOCATIONAL
AND
HOME
MAKING



From coast to coast, leading schools recognize Peterson's reputation for quality furniture for laboratory, home making and library departments. What ever your requirements may be, call on Peterson's experts for an economical solution to your problems... No obligation is incurred.

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HOW TO BUILD YOUR NEW SCHOOL

. . . For only **59 1/2c** PER CUBIC FOOT!



Using Smooth Ceilings System

Yes... we said 59 1/2c per cubic foot! That's the final cost of this school, recently completed at Mount Savage, Maryland. Completely fireproof, the building has tile wainscots, plastered walls and acoustical ceilings throughout.

Smooth Ceilings System of Flat Slab Construction, used throughout in the Mount Savage School, was in considerable measure responsible for its amazingly low cost.

This NEW Bulletin contains complete facts on how Smooth Ceilings System can cut the cost of your new school.

Write NOW for your FREE copy!



THIS NEW BULLETIN... CAN SAVE YOU HUNDREDS OF DOLLARS!

SMOOTH CEILINGS SYSTEM

Metropolitan Life Bldg. Dept. G Minneapolis, Minn.

**high back
chair
5311**

Helical
Springs and
Rubber
Filling
Overall—
Width 27",
Depth 30",
Height 38"



**side chair
1216**

Seat—
15" x 15"
Height—
Seat 18"
Overall 32"



**armchair
3007**

Seat—
19" x 18"
Height—
Seat 18"
Overall 31"



Thonet gives you these advantages

- **quality**—the finest in furniture since 1830
- **styling**—exclusive designs, lovely finishes
- **durability**—sturdily built for years of service
- **comfort**—engineered for maximum ease
- **planning service**—layouts and blueprints
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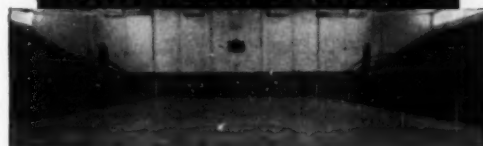
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**Powell, Wyoming, High
School Gymnasium**



**Pioneer in Two-Level Seating
WITH FOLDING STANDS**



Cushing & Terrell, Architects & Engineers, Billings, Montana



Here is the first gymnasium on record to have two-level seating with folding stands on both levels . . . the pioneer in modern planning and construction that meets *all* demands for both seating and floor space. For example, in this gymnasium area of 140' x 150', *Universal Folding Stands* provided 1,030 *more* revenue-producing seats, 12,790 *more* square feet of usable floor space, and \$27,000 *lower* costs than old type built-in seating. Think of it! Up to 30% greater seating capacity . . . yet a tremendous gain of usable space on both balcony levels and main floor when stands are folded. Equally important, total seating costs are usually cut in half . . . and the flexibility of *Universal Folding Stands* assures easy co-ordination with all architectural plans. Investigate now! Descriptive literature and working scale blueprints of two-level seating, as well as complete *Universal* catalog free on request.

Universal
BLEACHER COMPANY

606 SOUTH NEIL STREET • CHAMPAIGN, ILLINOIS

Bleacher Experts for Over 30 Years

WHAT'S NEW ...

Color Comparison Tubes

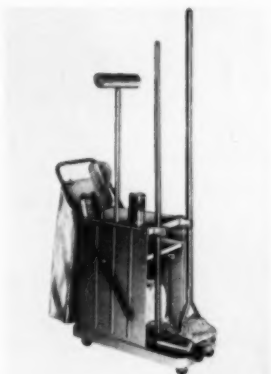
The Kimble shadowless bottom is a feature of the new Nessler Color Comparison Tubes with interchangeably-ground cap type stoppers. The tubes are designed to eliminate contamination resulting from the tendency of some solutions, when exposed to air, to oxidize or form surface films, and also to prevent the accumulation of dust on the surface of the column. Readings can be made without removing the stopper due to the Kimble shadowless bottom. Both standard and low form stoppered Nessler tubes are made in three sizes. **Kimble Glass, Div. of Owens-Illinois Glass Co., Dept. CUB, Toledo 1, Ohio. (Key No. 111)**

Maid's Carryall

A convenient device has been developed as an aid to the housekeeping department. Known as the Maid's Carryall, it is a portable, quiet cart which rolls freely on two swivel and two solid double ball bearing wheels with rubber tires. It can be guided by a convenient handle and weighs only 28 pounds.

The Carryall is designed to carry all of the cleaning supplies needed by a maid. She can take the compact Carryall from a closet, load it with the needed supplies and carry on her work

without return trips for extra supplies. Four holes in the top shelf and four at the bottom of the truck will support several long or short-handled instruments such as dust mops, brooms, wax spreaders and similar equipment. Or the same items may be fastened in the spring



clips on the front of the truck. In addition, a water pail can be stored on the bottom of the truck with brushes and rags. The top shelf will accommodate clean rags, cleaning powders and soaps or miscellaneous supplies. Two hooks

on the handle provide a place for carrying small hand dusters, whisk brooms or toilet bowl brushes. By keeping all equipment and supplies in the Carryall, cleaning accessories are within easy reach and the hazard of falling brooms or carelessly strewn supplies is eliminated. **Finnell System, Inc., Dept. CUB, Elkhart, Ind. (Key No. 112)**

Ice Flake Machine

The Ajax Electric Ice Flake Machine produces cold, dry ice 1/16 to 3/32 inch thick, with no sharp corners and of the proper width and length to provide maximum cooling effect. The low temperature—18 to 20 degrees—and dryness of the ice keep the flakes from freezing together. The ice is produced at a low cost and the operation of the machine is fully automatic.

Ice is frozen on a stationary, stainless steel drum which is directly connected to the refrigeration compressor through permanent, rigid connections. A revolving cutter blade removes the ice from the drum. All of the equipment is mounted in a heavy angle frame with outer panels of heavy gauge steel finished in hammerloid blue-gray. **Ajax Corporation of America, Dept. CUB, 2509 E. Washington Ave., Evansville, Ind. (Key No. 113)**

Continued on page 82

plan now

FOR A

Professionally-Run DINING HALL THIS FALL

Follow the example of more and more colleges and prep schools who have found the happiest solution to their student feeding problems is to put the entire job into experienced Crotty hands.

This assures immediate control of dining hall costs . . . and relieves administration of the

many other "headaches". A Crotty-trained staff takes over and functions smoothly as a school unit . . . guaranteeing excellent food, well-balanced menus, utmost economy, and continuity of responsible management.

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YOUR HEINZ MAN invites you to *sample* any Heinz variety before you buy it—so you can prove to yourself that Heinz leads in quality!

- Finer Heinz foods sell for no more than many other quality brands, give you low cost per serving, accurate cost-and-profit control and help

eliminate expensive leftovers. What's more, Heinz varieties require no time-wasting preparation!

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WESTON

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Write for latest details on WESTON Instruments; as well as a free copy of the 140-page monograph "Suggestions for Teaching from the field of Electricity."

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586 Frelinghuysen Avenue, Newark 5, N. J.

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WHAT'S NEW . . .

Floor Cleaner

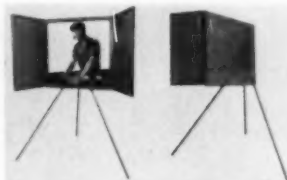
Emerel is a new fast acting floor cleaner and deodorizer designed for use on all types of floors and for cleaning washable walls and woodwork. It loosens dirt, grime and floor stains without scrubbing, yet contains no harsh chemicals, no abrasives, and no free alkali or harmful acids. It is supplied as a concentrate and mixed in a ratio of 1 to 20 in either hot or cold water. Emerel is spread on the floor and gently agitated. All dirt is quickly floated free of the floor surface and is ready for removal. It is effective in easily and quickly removing oil, grease, ink and rubber marks and deodorizes as it cleans. The product is supplied in 1, 5 and 55 gallon containers. S. C. Johnson & Son, Inc., Dept. CUB, Racine, Wis. (Key No. 114)

Projection Screen

Projection of motion pictures and slides in lighted rooms can now be done effectively with the new projection screen recently perfected by Radiant Manufacturing Corporation. The result of years of scientific and laboratory research, the Radiant Classroom Screen can be used in a room with blinds and windows open and normal ventilation retained. The teacher retains audience control and

students may make notes during projection.

The Classroom Screen has an unbreakable, wide-angle projection surface and is equipped with doors which protect the surface and permit easy, safe storing. It measures 43½ square inches closed with a viewing surface of 40 square inches. The screen frame and doors are lacquered pastel green, trimmed in redwood. The tilting chain



at the top of the screen makes it possible to tilt the screen to give the correct viewing angle for the entire room.

The Classroom Screen Stand, developed for use in conjunction with the new screen, is lightweight, strong steel construction, also finished in pastel green. The legs close for easy storage but are locked in position when the stand is in use. Use of the stand gives greatest flexibility in the placement of the screen but it may also be used on

a table or desk. If desired, the screen can be permanently installed or hung in front of a blackboard. Radiant Mfg. Corp., Dept. CUB, 2627 W. Roosevelt Rd., Chicago 8. (Key No. 115)

Spectro-Heat Burners

Spectro-Heat is the name now being used to designate Garland front-fired all-hot top for all commercial ranges. The Spectro-Heat hot top has seven front-fired burners, each individually controlled, permitting 50 per cent gas consumption without restriction of the cooking area. Heating with graduated intensities is made possible by the front-firing, adding an element of flexibility of heat over a great area. The chef can get high heats at the front with receding heats toward the rear, or any other heat intensities on the same top at the same time from the same burners. Since each burner has its own control, heat can also be varied from side to side. The new Spectro-Heat hot top facilitates cooking and simplifies work.

The Spectro-Heat top is also available in stainless steel ranges and can be used in ranges designed for manufactured, natural or Liquefied Petroleum gases. Detroit-Michigan Stove Co., Dept. CUB, 6950 E. Jefferson, Detroit 31, Mich. (Key No. 116)

Continued on page 84

Have you evaluated your

DINING HALL SERVICE?

Do you know if your operation is the most economical? . . . Are you satisfying your student body? . . . How does your food service compare with that of other schools and colleges?

SLATER SYSTEM is operating dining halls and cafeterias on thirty campuses east of the Mississippi, and the extensive knowledge we have acquired will be of value to you. Our method of operation enables us

- To relieve you of all operating details of your dining hall service, but still leave policy control in your hands.
- To serve nutritious, well-balanced meals that appeal to student appetites, with all menus subject to your approval.
- To operate your dining hall efficiently and economically, and determine for you in advance, the actual cost of your food service for the year.

Our twenty-five years of successful experience in food service management is available at your request.

Write for our 25th Anniversary Bulletin and list of our clients.

SLATER SYSTEM, INC.

Food Service Management

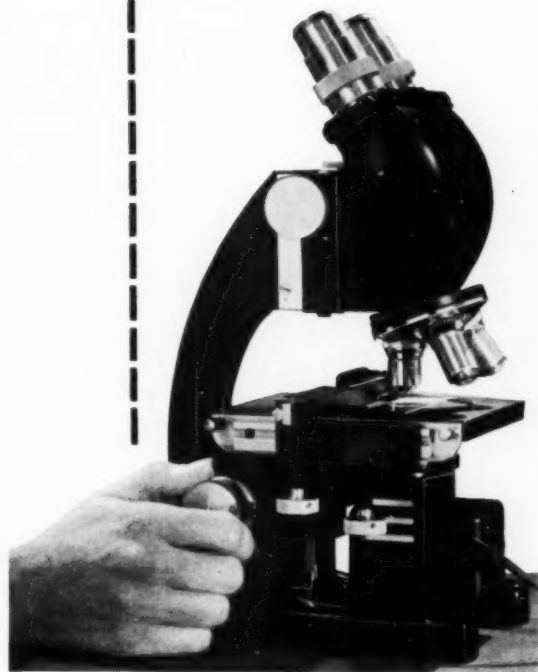
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PHILADELPHIA 46, PA.

NOW! "Easy Chair" MICROSCOPY with



BAUSCH & LOMB
Dynoptic
LABROSCOPES



A quick setting of the coarse adjustment . . . then *all* controls are operated with the hands *at rest* on the table. Fine adjustment is controlled by a knob only three inches above the table top; critical focus is more quickly, more easily achieved, with the operator completely relaxed. The hand moves easily from fine adjustment to mechanical stage knobs.

Comfort and convenience have influenced Labroscope design throughout—providing the fatigue-free operation necessary for more thorough examinations over prolonged periods—assuring full benefit of *the finest laboratory microscope ever made.*

WRITE for free demonstration and complete catalog literature. Bausch & Lomb Optical Company, 767-11 St. Paul Street, Rochester 2, New York.



Most Comfortable
THE WORLD'S FINEST LABORATORY MICROSCOPES

WHAT'S NEW . . .

Explosion-Resistant Window

A special type of window has been developed to minimize the effects of explosive forces. A glass-plastic laminate, to be known as Flexseal Bomb Glass, the window is said virtually to eliminate the dangers of flying glass in explosion areas. Flexseal Bomb Windows will resist normal atmospheric pressures because of the special properties incorporated in the design. When these are exceeded by a bomb blast or pressure wave, the window will open automatically by folding about its edges. This releases the pressure, preventing the window frame from being blown in and greatly reducing the possibility of flying fragments.

The window consists of three layers laminated into a single unit. The outer layer is a sheet of glass, the middle a partially segmented sheet of polyvinyl butyral plastic, and the inner layer consists of four triangular shaped pieces of glass, the central area edges of which register with the segmented edges of the plastic. The plastic layer extends beyond the glass edges and is bolted to the window frame to serve as hinges, thereby permitting the four segments to open like doors when the outer plate of glass is broken. After an explosion of sufficient force to open the bomb window, the four segments may be re-

turned to position and retained there by many simple methods for the emergency period. Pittsburgh Plate Glass Co., Dept. CUB, 632 Duquesne Way, Pittsburgh 22, Pa. (Key No. 120)

Rotary Snow Plow

The Jari Jr. Rotary Snow Plow is designed to do an hour's snow shoveling



in ten minutes and to function efficiently in wet and slushy snow, dry or packed snow. It is a light, powerful, self-propelled rotary snow plow with a rotary rake which chews the snow for easy removal. The open front cuts a swath 16 inches wide and scoops the snow in for quick pick-up. An adjustable casting chute directs the snow stream out of the path. The two wheel drive has positive forward movement obtained by hardened

steel pinions engaging notches in rubber tires. Jari Products, Inc., Dept. CUB, 2938 Pillsbury Ave., Minneapolis 8, Minn. (Key No. 121)

Plastic Wall Tile

Eighteen months of research were spent in development of Church Wall Tile. The resulting tile has the flexibility to offset expansion and contraction movements on walls without cracking, and it is chipproof and warpproof. It is carefully finished and inspected to ensure years of normal use without crazing or cracking.

The tile is molded and annealed, is 0.090 plus inch thick and the marble tone pattern resembles a smoky or wispy effect. Standard gauge tile 4 1/4 inches square is available in six colors, heavy gauge tile the same size is available in 17 colors and deluxe heavy gauge tile, 8 1/2 inches square, is available in 12 colors. Color control is carefully handled to eliminate segregation by lot or shade number. The tile is light in weight, can be installed upon any structurally solid, smooth, clean, dry surface, is of solid molded materials with no coating to separate, is sanitary and easy to clean and retains its attractive appearance. C. F. Church Mfg. Co., Dept. CUB, Holyoke, Mass. (Key No. 122)

Continued on page 86

Get a FREE sample of **LEMON QUICK** the NEW imitation lemon juice base for baking, cooking, beverages

Prove it to yourself that

LEMON QUICK has a real fresh lemon flavor, no seeds or pith, and is free from preservatives.

LEMON QUICK will not spoil, eliminates messy squeezing, contains stable vitamin C, saves time, and is more economical and easy to use.

TESTED AND APPROVED by leading chefs for use in sauces, pies, icings, or in anything where lemon is required. Delicious for cold or hot lemonade, hot or iced tea.

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**Wall-Saving
Easy Chair**
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Also available in sectional love seat and davenport.

For prices and complete information on our furniture for dormitory, library and other college uses, see your dealer or write us.

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It's the modern way—

TEACH WITH
WEBSTER ELECTRIC
Ekotape[®]
Portable Tape Recorder

For

- Foreign languages
- Re-broadcasting radio programs
- Speech and diction classes
- Orchestra and band rehearsals
- Voice instruction

The Ekotape portable tape recorder is an efficient teaching tool that adds interest to learning. Modern educators like it because of its many uses, its high fidelity sound reproduction, and its simple, economical operation. The Ekotape portable is as smart in appearance as the finest luggage. The lightweight portable feature makes it easy for women teachers to carry from room to room. It gives two full hours of playing time with a seven-inch reel of tape and one hour with a five-inch reel. In order to appreciate all the advantages of having the Ekotape portable in your school—ask for a demonstration. Webster Electric Company, Racine, Wisconsin. Established 1909.



Two Models • Two Speeds

Two Reel Sizes

Model 109 operates at 3 1/4" per second.

Model 111 operates at 7 1/2" per second.

Also Two Reel Sizes
7" (1200') reels or
5" (600') reels.



WEBSTER ELECTRIC
RACINE • WISCONSIN

"Where Quality is a Responsibility and Fair Dealing an Obligation"

WHAT'S NEW...

Multi-Speaker Unit

Great flexibility in sound reproduction is offered in the new multi-speaker unit introduced for the 16 mm. Kodak Pageant Sound Projector. Four widely separated speakers may be used with the projector at one time, thus permitting sound reproduction to be suited to the needs of auditorium or other audiences regardless of existing acoustical conditions. With such a unit it becomes unnecessary to raise the sound volume of one speaker to such high levels as to impair fidelity.

Each of the 8 inch speakers in the new unit is mounted in an individual baffle. One is supplied with a 35 foot cord and two with 45 foot cords. The three speakers are assembled together to form a convenient carrying case which matches the Kodak Pageant Sound Projector case in appearance. The speakers are equipped with connectors for ease in arranging them in the correct electrical hook-up. The complete unit is light in weight and will enclose a 2000 foot reel. **Eastman Kodak Co., Dept. CUB, Rochester 4, N.Y. (Key No. 117)**

Heavy Duty Sander

The new Model 106 Guild Sander is powered by a heavy duty Universal motor but its design eliminates most

servicing problems. It is low in cost and is designed for construction, rehabilitation and maintenance problems where a hand sander is needed. It is economical and safe for project work and has sufficient power and dependability for use in resurfacing desks, chairs and blackboards and for any maintenance



work in college buildings and dormitories.

The orbital motion of the machine produces a uniform smoothing action with, against and across the grain without scratch or mar. It is easy to operate since it is light in weight and well balanced, cutting fatigue to a minimum. The sander is easily maneuvered, the shaped handle permits a firm grip, and the trigger switch is safe and easy to operate. **The Porter-Cable Machine Co., Dept. CUB, Syracuse 8, N.Y. (Key No. 118)**

Wear-Ever Professional Cutlery

The line of professional cutlery started by Wear-Ever last year has now been built up into a complete service offering 65 separate items. This fine cutlery is scientifically designed by experts in the field, men who know cutlery and understand the needs. Careful metallurgical research and extensive field testing have gone into the construction of the new line. Blades are skilfully ground to yield the flattest possible surface, eliminating hollows or wavy grind. Knives are carefully drawn to a C-Rockwell hardness most suitable for professional use. The tang end of the blade extends to the end of the handle, giving greater strength and durability.

Two different steel alloys are used in the manufacture of the new cutlery: high carbon chrome vanadium alloy, which gives hardness, fine texture and toughness, and a new, special, high carbon, stainless alloy with both edge-holding and tarnish-proof qualities. The smooth, long-wearing Ebonwood handles are fastened with three compression type rivets and the close fit eliminates unsanitary crevices. The line is complete, offering all items needed for meat cutting, baking and cooking for any food service. **The Aluminum Cooking Utensil Co., Dept. CUB, New Kensington, Pa. (Key No. 119)**

Continued on page 88

is this important?

JOHN E. SJÖSTRÖM COMPANY
1727 N. Tenth Street, Philadelphia 22, Pa.

Well, if you're planning to purchase library furniture, it *certainly* is.

Because, although you may not have realized it, each of those little drawings represents an important construction feature of our "New Life" Library Furniture.

There are lots more of them, too—and you should become thoroughly familiar with all.

Because, only then can you *properly* analyze, compare, and evaluate, and determine precisely what you want in *your* library furniture.

Construction is just one of *many* important elements you will want to *investigate carefully*. Company policy, furniture design and quality are important elements, too. Our Catalog L-50, available upon request, will give you some details. Our field representative can give you many more. Request that we have him call.

MANUFACTURERS OF *New Life* LIBRARY FURNITURE



Sure!
Maintenance Men
are
HARD TO
GET ...

*That's why
I depend on*

HILLYARD MAINTAINER SERVICE

Why "buck" the problem when you can relax with easy-going Hillyard Floor Care. Simplified Hillyard Care substitutes "know-how" for brawn . . . easier methods save man hours of work . . . specialized chemical products perform with "behind-the-ears" thoroughness. . . when I need help—Hillyard sends along a trained floor expert to lend a hand on the job . . . his straight-from-the-shoulder advice doesn't cost me a cent.

YOU CAN'T BEAT SERVICE LIKE THAT
any day in the week—particularly NOW when good maintenance men are so hard to find.

- ★ Talk over your maintenance program with a Hillyard Maintainer today. Get the benefit of his years of specialized experience. Learn the Hillyard way to maximum maintenance with a minimum crew . . . and reduce those costs as much as 50%. Write for Free Hillyard Help. Dept. D-11.

*"on your staff
not your payroll!"*



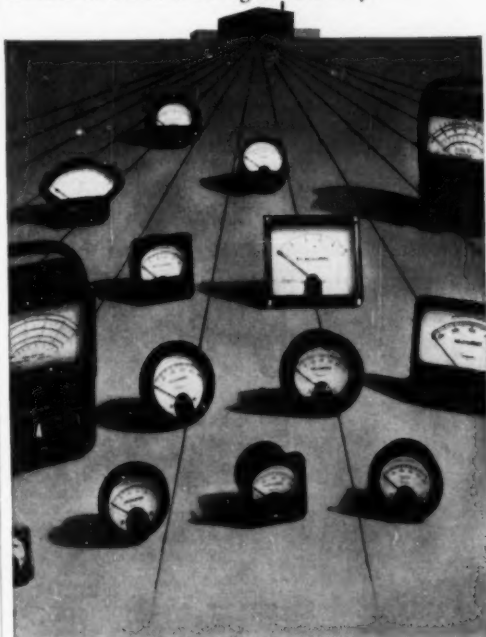
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WHAT'S NEW . . .

Hand Dryer

A newly designed model of the National Hand Dryer is being introduced. In the new unit an automatic circuit breaker prevents the heating element from burning out. Concealed mounting bolts prevent removal of the dryer from the wall. The new model is attractive in appearance and has the approved mechanical features of the line of National Hand Dryers. The dryer heats instantly at the touch of the button and discharges a maximum of heat together with maximum air volume for faster drying. The nozzle can be rotated a full 360 degrees. The dryer is automatic, turning itself off after 30 seconds. The mechanism is sturdy and tamper-proof, minimizing maintenance. **National Dryer Sales Corp., Dept. CUB, 616 W. Adams St., Chicago 6. (Key No. 127)**

Simplified Drapery Handling

Hours of work in measuring and stitching, as well as in the laundry can be saved with the new drapery system known as Snap-A-Pleat. The new easy pleating kit recently introduced contains a strip of washable buckram tape and a set of ten small metal pleaters that snap onto small round fasteners attached to the tape. Regulation drapery hooks are used to slide into the pleater for hanging

the draperies on all types of rods.

The tape is simply sewed to the material on a sewing machine and the attached fasteners permit the easy pleating of the drapery top hem. A small clip furnished for each pleat is used to hold the creases in place. The metal pleater, with hook, is then snapped into place



and the drapery is ready to hang. For laundering, the metal pleater, with hook, is removed, the draperies can be laundered and ironed straight, and it is a simple matter to repleat by attaching the pleater and hook. No part of the Snap-A-Pleat is visible from the front when the draperies are hung and the even spacing and pleating give a professional appearance to draperies that can be made in the sewing room. **John S. Vance Co., Dept. CUB, 2323 Giddings St., Chicago 25. (Key No. 128)**

Continued on page 90

Roost-No-More

A new product is being introduced to help protect public buildings from roosting and nesting birds. Known as Roost-No-More, the product is easily applied with a standard caulking gun along ledges, ridges, and other areas where pigeons, starlings and other bird pests light or nest. The product does not wash off in rains and lasts about a year. Harmless to birds, Roost-No-More discourages return of the birds after the building has been treated. **National Bird Control Laboratories, Dept. CUB, 1035 W. Lake St., Chicago 7. (Key No. 129)**

Drink Dispenser

The new Model 275 Drink Dispenser has a removable bowl which is transparent, is easily and quickly removed by hand and can be quickly cleaned. The unit provides a versatile, sanitary, electrically refrigerated dispenser which is designed to dispense frozen or fresh juices where constant agitation is required. It is equipped with self-contained, heavy duty compressor motor, vacuum sealed and thermostatically controlled to maintain an even temperature of 40 degrees F. **Majestic Enterprises, Ltd., Dept. CUB, 959 Crenshaw Blvd., Los Angeles 19, Calif. (Key No. 130)**

Sanibag

Service

Offers Women the BETTER WAY to Dispose of Sanitary Napkins

WOMEN PREFER

the SANIBAG method of disposing of sanitary napkins. Once introduced to Sanibag, they accept it as the quickest, cleanest and most discreet disposal method. Discomfort and personal distress can be among the greatest enemies of successful learning.

EASY ON PLUMBING

Sanibags reduce embarrassing toilet stoppages that too often occur in women's lavatories . . . in fact, Sanibag service costs so little that it pays for itself many times over in reduced plumbing bills and washroom maintenance. Used by hundreds of schools, dormitories and sororities.

Why not investigate the advantages of Sanibag now?

Send for free samples and complete information. When you write, please include your washroom supply merchant's name and address.

HELP me Dispose of Sanitary Napkins

Sanibag

Buy from

Bier & Company

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Choose these fine Liquid Soaps FOR YOUR LAVATORIES AND SHOWER ROOMS

DOLGE is proud of its reputation for producing the very highest quality liquid soaps, and invites comparison on any basis—clarity, brilliance, rich lather, pleasant aroma. DOLGE soaps will not irritate the skin; will not turn cloudy or rancid even on prolonged storage.

BALMA
THE PREMIUM SOAP

BALMASEPTIC
ANTISEPTIC SOAP

A truly top-quality liquid soap, unsurpassed for clarity, brilliance and rich, soil-re-moving lather. Its pleasant, delicate scent is derived from fine perfume like that used in the most luxurious cake soaps.

Combines the fine qualities of BALMA with the antiseptic Hexachlorophene (G-11). Regular shower use sharply reduces bacterial count on skin and provides a remarkably efficient deodorant action for round-the-clock body freshness.

Dispensers available in several types

Have your DOLGE SERVICE MAN demonstrate these outstanding soaps. . . Write for detailed literature.

DOLGE
WESTPORT, CONNECTICUT



Thanks to new "Thread-Easy" design, hundreds of youngsters are now operating the RCA "400" projector.

Amazing new "Thread-Easy" Design makes RCA "400" easiest to thread

With this new ultra-simple projector, you can actually thread the film in only 30 seconds. Thread it while you're lecturing. Thread it in the dark. Even a child can thread it. It's that simple.

Every operation easier with RCA "400"

Here is a projector so easy to use that a 12-year-old child can be the projectionist. So simple you can set it up with pictures and sound on the screen in only 2 minutes. And they are top-quality pictures and sound... better than recommended standards of *SMPTE, by actual tests.

Easy to pack up, too. Takes only 3 minutes to button up the Junior model, ready to travel. And easy to carry. Single-case Junior weighs only 33½ lbs. Women appreciate its narrow case, rounded corners, proper balance. No chafing your leg as you walk.

Longer film life

Your precious film literally "floats" through this new "400" projector. "Thread-Easy" design is so amazingly effective, even minor errors in threading will not damage film. With projector running, you can open and clean picture gate or sound optics... without damage to film. And you can project the same film 50 or 500 or 5,000 times... without appreciable wear or damage to film!

No more last-minute failures!

It's ultra-dependable, too. Built for the hard knocks of school and commercial use. You can easily replace projection lamp in 45 seconds, exciter lamp in 20 seconds. Rewind 10-minute film in 66 seconds, without changing belts, pulleys, or reels. It's the only projector powered by a big A-C motor, 500% oversize for better sound stability. Big motor takes it easy, stays cool, lives longer.

And it's quiet. Operating noise only 58.5 decibels. Quieter than recommended by *SMPTE... quieter than other projectors by actual tests.

In competitive tests, RCA 400's win out

In a single purchase, Pennsylvania schools bought 572 RCA "400's". Baltimore schools bought 156. Washington, D. C. schools bought 81. Already many thousands of RCA "400's" are out on the job... making things easier... for busy people just like you.

Operate it! Convince yourself!

If you use 16mm film in your teaching or selling (and who doesn't?), you owe it to yourself to find out about this revolutionary new easy-to-use projector. The new "Thread-Easy" design is the culmination of 23 years of RCA research. Send coupon for demonstration. Operate it yourself. Backed up by RCA. Nationwide service available. Large sales permit surprisingly low price for this top-quality equipment. So mail coupon TODAY.



RCA "400" Junior. Handsome blue-green hammertone finish. Single case weighs 33½ lbs. 7-watt amplifier, 8-inch speaker. Excellent for medium to large rooms.



RCA "400" Senior. Same as "Junior" except it has 10-watt amplifier, 10-inch speaker. Projector case weighs 36½ lbs. Speaker Case weighs 26 lbs. Excellent for larger rooms, auditoriums.

*SMPTE: "Society of Motion Picture and Television Engineers," leading authority on projector standards. SMPTE recommends "unsteadiness of projected picture less than 2/10 of 1% of picture width."

In RCA "400" projector, horizontal unsteadiness is 1/10 of 1% (3 times as good as SMPTE standards). Vertical unsteadiness is 1/7 of 1% (2 times as good as SMPTE standards).

Sound quality is also better than SMPTE standards. Distortion never exceeds 5%.

All tested and proved by RCA, foremost pioneer in 16mm sound projectors.



FREE BROCHURE—MAIL COUPON—NOW

EDUCATIONAL SERVICES, Dept. 34W
Radio Corporation of America, Camden, N. J.
Please send me, without obligation, full story on new "Thread-Easy" RCA "400" 16mm projector.

Am interested in ☐ Junior Model for classrooms and small auditoriums
☐ Senior Model for larger auditoriums

Name

School

Address

☐ Please arrange actual demonstration



RADIO CORPORATION of AMERICA

EDUCATIONAL SERVICES,

CAMDEN, N. J.

WHAT'S NEW ...

Insecticide

A new insecticide has been announced that is designed to kill all common insect pests instantly. It is non-toxic to warm blooded animals, non-staining and free from unpleasant odor. The new product combines a newly discovered insecticide in a formula that increases the insect kill, and is being distributed under the trade name, Formula "444."

A new portable electric aerosol sprayer for use in applying "444" has also been announced. Called the Torpedo sprayer, it is made of stainless steel with Plexiglas handle. It is designed to penetrate the deepest cracks and crevices in walls, floors and between stored products with a dense, effective spray. **Bromm Chemical Co., Dept. CUB, 319 Goodsell St., Evansville, Ind. (Key No. 123)**

Complete Kitchen Unit

Home economics departments will be interested in the new kitchen recently introduced. It combines a refrigerator, a large storage drawer, a 12 by 16 inch sink, a drainboard and a three burner gas range in slightly more than four square feet of floor space. Other models are available with electric burners for cooking. The unit can also be used in instructors' rooms to provide facilities for

lunches and snacks, and in student and personnel living quarters.

The four cubic foot refrigerator is insulated with Fiberglas. The gas burners have a valve which allows adjustment for natural, manufactured or bottled gases without change of hood. The



cover for the range provides the drainboard adjacent to the sink for dishwashing. The top of the unit is made of heavy gauge porcelainized steel and the balance of the unit is heavy steel finished in Du Pont Dulux. **General Air Conditioning Corp., Dept. CUB, 4542 E. Dunham St., Los Angeles 23, Calif. (Key No. 124)**

"Silva-Chips"

Bright aluminum foil is used to form small, attractive round dishes which can serve as butter chips, for serving jam, jelly, marmalades and sauces in individual servings, or as individual, disposable ash trays. Known as "Silva-Chips," the little servers are grease resistant, leakproof, sanitary and low in cost. They are bright in finish and add a cheerful note to the table or tray. As "Silva-Chips" are stamped from heavy aluminum foil, the name or insignia of the college, fraternity or other organization can be readily stamped on the bottom. **Woodlets Incorporated, Dept. CUB, Portland, Pa. (Key No. 125)**

Dixie Food Dish

Colleges with soda fountains or lunchrooms will be interested in the new addition to the Dixie paper cup line. The new Dixie Food dish has a turn-down, flanged edge on which is printed an adaptation of the Melody design. The tab on the new dish is glued and the bottom is rounded to ensure fast, positive pick-up by the container. The dish is designed for use in serving fruit, ice creams, puddings and other desserts. **Dixie Cup Co., Dept. CUB, Easton, Pa. (Key No. 126)**

Continued on page 92



Master-Keyed P-570



Write for details and free Catalog Folder.

DUDLEY LOCK CORPORATION

Dept. 1122, Crystal Lake, Illinois

**This is where
you can save
time and money**

Stop the confusion and lost time resulting when locker locks aren't standardized. Change to Dudley Locks, schoolwide, and get rid of your locker problems. No budget expense when you use the Dudley Self-Financing Plan.

Master-Charted RD-2



A Chair Designed to Make History

NEW *Clarín* TABLET ARM CHAIR that Folds

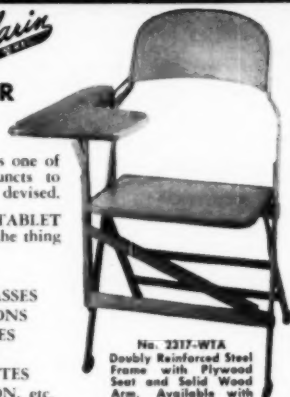
Will make its mark as one of the most useful adjuncts to portable seating ever devised.

This FOLDING TABLET ARM CHAIR is just the thing for—

LECTURES
OVERFLOW CLASSES
EXAMINATIONS
LABORATORIES
SEMINARS
TAKING MINUTES
NOTES, DICTATION, etc.

The arm is an integral part of the chair—NOT AN ATTACHMENT. It may be adjusted to several positions—

- 1) Raised upright to permit free ingress and egress.
- 2) Completely lowered to the side.
- 3) Folded flat against the seat for compact storage.



No. 2317-WTA
Doubly Reinforced Steel Frame with Plywood Seat and Solid Wood Arm. Available with Seat only or Seat and Back upholstered.

Rubber Feet prevent noise and marring.

The Only Folding Chair of its Kind anywhere.

Write today for folder, prices and delivery data.

CLARIN MFG. COMPANY
4640 W. Harrison St., Dept. 9, CHICAGO 44, ILL.



Again, **QUIET** passes the entrance examinations

Here's a perfect set-up for noise—hard-surfaced floors, heavy traffic, voices, footsteps, continuous activity. Difficult test for modern sound conditioning but this installation at Cameron State College in Lawton, Oklahoma does create an atmosphere of Quiet, appreciated by staff and students alike.

Unwanted noise is checked by installations of modern Acousti-Celotex Sound Conditioning in schools all over the country. Not only in entrances and corridors, but in classrooms, libraries, gyms, cafeterias, and auditoriums as well. Sound absorbing Acousti-Celotex tile can be quickly and easily applied on the ceiling at moderate cost. No special maintenance is required. Repeated painting and washing does not interfere with efficiency.

Your local distributor of Acousti-Celotex products will help you get the most efficient and attractive installation possible. He is a member of the world's most experienced Sound Conditioning organization, thoroughly trained, thoroughly experienced... with the complete line of top quality materials necessary to meet every specification, every requirement, every building code.

FOR A FREE ANALYSIS of your particular noise problem, write now for the name of your local distributor of Acousti-Celotex products. We will also send you a free copy of the informative booklet, "Sound Conditioning for Schools and Colleges"—on request. Address: The Celotex Corporation, Dept. T-111 120 S. La Salle St., Chicago 3, Ill. In Canada: Dominion Sound Equipments, Ltd., Montreal, Quebec.

TOPS IN WASHABILITY—Two coats of tough finish bonded under pressure of a hot knurling iron builds a surface of superior washability right into Celotex Cone Fibre Tile.



ACOUSTI-CELOTEX

PRODUCTS FOR EVERY SOUND CONDITIONING PROBLEM
THE CELOTEX CORPORATION, 120 S. LA SALLE ST., CHICAGO 3, ILLINOIS

WHAT'S NEW . . .

Fin-Vector Radiation

The new "Fin-Vector" radiation unit has been introduced for greater versatility, performance and economy. Several types of covers are available to meet the needs for various types of installations. A new adjustable hanger for two or three-tier assemblies provides for easy installation. Only the top tier need be fastened, lower tiers hanging freely.

The tubes and fins of the Fin-Vector heating element are made of metals especially selected for high conductivity of heat. The units are offered in two sizes, 1 1/4 inch tube with 3 1/4 inch square fins and 2 inch tube with 4 1/4 inch square fins. C. A. Dunham Co., Dept. CUB, 400 W. Madison St., Chicago 6. (Key No. 131)

Air-Pressurized Extinguisher

A new one quart air-pressurized fire extinguisher has just been made available. It discharges vaporizing liquid fluid for extinguishing both flammable liquid and electrical type fires. It is quick acting and aims and operates like a gun, hitting the fire target accurately with no unnecessary loss of liquid. It requires no pumping and can be easily operated by anyone, with one hand.

Recharging of the unit is done by

simply pouring in more vaporizing liquid. Any standard air chuck can be used for pressurizing. Known as the Alfco Pressurized Fire-Gun, the unit should be available around electrical



equipment or where small oil and grease fires might be a hazard. American-La-France-Foamite, Dept. CUB, Elmira, N.Y. (Key No. 132)

Floor Level Cleanout


The new Supremo "Perfect Seal" Floor Level Cleanout has been designed to permit quick and easy access to drain-

age lines located in heavy traffic areas. A plug which forms a gas and water tight seal in the Cleanout is so constructed as to assure access to drainage lines with ease, even after many years. The threads of the plug cannot "freeze" to the body, thereby eliminating the possibility of damage to the plug or to the cleanout body as the plug is being removed. Known as model Z-1325-10, the unit is so constructed that the housing is separate from the body, thus making it possible for the pipe to contract or expand, or the surfacing material encasing the housing to settle, without causing damage to the cleanout or pipe. J. A. Zurn Mfg. Co., Dept. CUB, Erie, Pa. (Key No. 133)

Wall Cleaner

A new cleaner has been developed particularly for cleaning and washing walls. Known as Wall-Kleen Krystals, the product is non-abrasive, economical, and easy on the hands. It is mixed with water according to directions, wiped on by hand or by machine and when wiped off, the dirt and soil come with it. Scrubbing and rubbing are not required and the solution is said to clean even the dirtiest surfaces. Ross & Story Products Corp., Dept. CUB, Lincoln Bank Bldg., Syracuse 2, N. Y. (Key No. 134)

Continued on page 94



MOORE KEY CONTROL*
OFTEN PAYS FOR ITSELF
IN LESS THAN 2 YEARS!

You owe it to yourself to investigate this modern system of key control. It saves money year in and year out by eliminating expensive repairs and replacement of locks and keys. What's more, it guarantees security, convenience and privacy. No wonder Moore Key Control is used throughout schools, institutions, hospitals, industry, government, transportation, communications, housing . . . wherever keys are used. Send for details today!

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Wall cabinets of every size from \$30.20 up



Section of a typical control panel



Drawer file cabinets

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Mail Coupon today for Free Booklet

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Please send booklet, "The Missing Link," describing MOORE KEY CONTROL.
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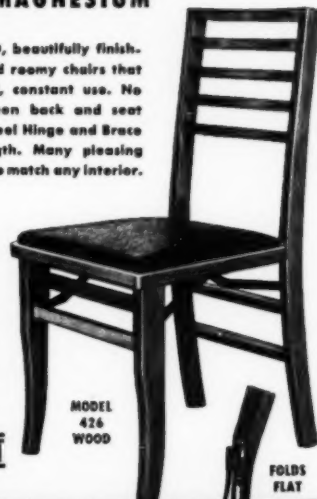
CHAIRS *That Fold*

WOOD or MAGNESIUM

SMARTLY STYLED, beautifully finished, comfortable and roomy chairs that fold. Built for hard, constant use. No glued joints between back and seat frame. Rastetter Steel Hinge and Brace gives extra strength. Many pleasing styles and finishes to match any interior.

Fold compactly. Store in small space.

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MODEL 426 WOOD

FOLDS FLAT



LOUIS RASTETTER and SONS CO.

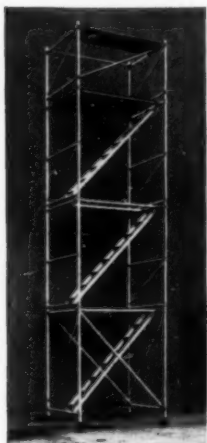
1326 WALL STREET • FORT WAYNE 1, INDIANA
ESTABLISHED 1881 • FINE FURNITURE THAT FOLDS

BUY MORE "TIME ON THE JOB" with these ALUMINUM SCAFFOLDS

On almost any maintenance or electrical job one of the things you must consider is "set-up" time... how long it takes your men to get ready to work.

That's where these Aluminum Sectional Ladder Scaffolds and Aluminum Sectional

Rolling Scaffolds save you time and money... by cutting "set-up" time to the bone and giving your men more "time on the job".



Here's why:

- It's easy to carry the light component parts to the job area.
- Scaffolds go up faster because of prefabricated design and snap-on braces.
- Scaffold quickly adjusts to proper height.
- Easy-to-climb stairways help get your men on the job... fast.

These easy-to-handle Scaffolds save time in dismantling, too. Non-rusting aluminum requires minimum maintenance. Used by leading maintenance men and electricians.

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NEW

KELLOGG

THE STATE ROOM,
Kellogg Center, Michigan State College

CENTER

EQUIPPED WITH "CHF" TABLE BASES

Designed as a world-wide model for Adult Education, the new Kellogg Center for Continuing Education places Michigan State in the foremost ranks as a training center. This modern, new \$2,000,000.00 building provides restaurant and hotel management students with one of the best working laboratories in the country.

The fact that Chicago Hardware Foundry table bases were specified for this new building attests to the serviceability of cast construction and the beauty of "CHF" design and finishes.



Lifetime porcelain enamel gives a colorful finish to the cast iron bases. Columns are chrome plate. "CHF" Table Bases are also installed in the Michigan State Student Union Building.



Write for New Brochure of Award-Winning Installations

Illustrations show interiors and design of many of the country's finest food and drink establishments... six of which won awards in the 1951 Annual Food Service Contest. WRITE TODAY FOR YOUR COPY.

Manufacturers of "CHF" Stools and Tables for the Food and Drink Industry • Sani-Dri Electric Hand Dryers for Washrooms

DISTRIBUTORS IN PRINCIPAL CITIES

THE CHICAGO HARDWARE FOUNDRY CO.

"Dependable Since 1897"

31111 COMMONWEALTH AVE., NORTH CHICAGO, ILL.

WHAT'S NEW ...

Product Literature

• "Horn Folding Gym Seats" are illustrated and described in a new catalog released by Horn Brothers Co., Division of Horn Industries, Fort Dodge, Iowa. Comfort and safety features of the folding seats are discussed as are other special features. Space requirements for Horn standard folding gym seats are given as well as specifications. (Key No. 135)

• The new Holophane "Datalog" is a 64 page catalog of pertinent information regarding all Holophane products. It contains 90 product illustrations and many cross-sectional drawings and candlepower distribution curves. Special emphasis is given to the description, performance, application and installation as well as the dimensional data of these lighting units designed and engineered for specific purposes. The new Holophane Light and Vision Institute is also described. The "Datalog" is available from the Holophane Company, Inc., 342 Madison Ave., New York 17. (Key No. 136)

• The complete catalog of radio, television and other electronic parts and equipment for classroom, laboratory and shop handled by Allied Radio Corp., 833 W. Jackson Blvd., Chicago 7, is now

available for 1952. This large, comprehensive Catalog No. 127 has 212 pages this year and places special emphasis on the selection of books, materials, training kits, test instruments, parts and equipment required by schools and colleges for radio and electronics training activities. The new catalog has an expanded section on portable Geiger counters and an extensive rotogravure section is devoted to electronic sound equipment for a wide variety of school applications. Especially prepared data discusses the proper selection of amplifiers, public address equipment and intercommunication systems for use in classrooms, lecture halls, auditoriums and outdoor stadiums. (Key No. 137)

• The qualities and performance of Joanna Vinylized Wall Fabric are discussed in an 8 page illustrated brochure recently released by Joanna Western Mills Co., 22nd & Jefferson Sts., Chicago 16. The booklet presents a step-by-step story of the construction, application, wearing qualities and recommended uses of this plastic-on-cloth material developed to cut decorating costs for institutions since it is resistant to scuffing, scraping and bruising, stains and smears, and can be washed with plain soap and water or any ordinary cleaning solution. A card of actual samples is included. (Key No. 138)

• A new informational folder, Form 2R8132, presenting features of the new Model "400" Senior and Junior 16 mm. motion picture projectors has been released by the RCA Visual Products Section, RCA Victor Div., Radio Corporation of America, Camden, N. J. The folder also includes complete information on projector and speaker combinations for various applications in both permanent and semi-permanent indoor and outdoor installations. (Key No. 139)

• The story of Casey & Case Synthetic Rubber Based Corrosion Control Coatings is told in a booklet recently released by Casey & Case Coating Co., P. O. Box 151, Maywood, Calif. Presenting detailed information on the characteristics, properties, uses and methods of application of synthetic rubber resin based coatings, the new brochure gives interesting data on the use of resin floor primer and finishes which should be of interest to the administrator and to maintenance engineers. (Key No. 140)

• A four page technical folder on "Penetrating Protective Paints" has been issued by The Wilbur & Williams Co., 130 Lincoln St., Boston 35, Mass. It is designed as a quick reference index for determining the most suitable coatings for rust prevention, chemical corrosion and dampness. (Key No. 141)

Continued on page 96

**ALL STEEL
COMBINATION
STORAGE UNITS**

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YOU CAN BE SURE that your stored films will be safe from dust, heat or dryness with NEUMADE COMBINATION STORAGE UNITS!



Model MM-119—A practical storage cabinet for the varied film library. Holds 400, 800, 1200, 1600 ft. reels; 100 filmstrip cans plus utility drawer in base. Overall size: 30" wide, 70" high, 16" deep. Over 50 models to choose from. Write for free catalog.

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New York 18, N. Y.

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YOUR
FILM!**



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DITTO
D-10
Direct (Liquid) Process Duplicator
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120 bright copies a minute—1 to 4 brilliant colors at once—direct from anything you type, write or draw—up to 300 clear-cut copies per master—finger-flip "Magic" Copy Control to assure all-over intensity of every copy throughout every run—on any weight paper or card—any size from 3" x 5" to 9" x 14". No stencils, no mats, no inking, no make-ready! That is the tremendous story of Ditto's new, revolutionary D-10 Direct (Liquid) Process Duplicator which sets a new precedent for economy, speed, quietness, long life and ease of operation. Beyond compare for school use, in classroom, administrative and extra-curricular activities!

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"One of
America's
Best"



The new South School, New Canaan, Connecticut, is already widely acclaimed as an example of how intelligent planning with modern equipment and materials can make a public school one of America's best. This fine school was built under the guidance of Albert P. Mathers, Superintendent of Schools. It was designed by Sherwood, Mills & Smith, Stamford, consulting with O'Connor & Kilham, New York. The installation of modern tubular steel furniture was arranged through Gledhill Brothers, Boston, distributors for Heywood-Wakefield Company, One Park Avenue, New York, N. Y.



Reflecting the best suggestions of teachers, janitors, parents, bus drivers and physicians, the appointments of South School reflect the finest features of today's planning for the future. Note how readily the Heywood-Wakefield tubular steel desk and chair units can be arranged to meet each classroom's specific needs.

Table-Desk S 1008 OF and Chair S 915 are used extensively throughout the seventeen classrooms of New Canaan's new school. Note how the intelligently graded sizes permit proper selection for the individual pupil. These and other Heywood-Wakefield units are fully described in our illustrated catalogue. Write to: Heywood-Wakefield Company, School Furniture Division, Menominee, Mich.

Heywood-Wakefield School Furniture is Advertised in TIME



School Furniture Division
Menominee, Michigan



WHAT'S NEW . . .

• A complete new Catalog No. LP-31 of "Laboratory Glassware" has been issued by Corning Glass Works, Corning, N.Y. The 190 page book gives detailed descriptive information and prices on the full line of laboratory glassware available from this company and has a special section on Vycor brand laboratory glassware and its properties. (Key No. 142)

• Over 200 items of equipment for school and church are listed in the new Catalog No. 218 released by Crown Institutional Equipment Co., 218 S. Wabash Ave., Chicago 4. The full line of equipment, including folding chairs, classroom seating, folding tables, office furniture, teachers' desks and chairs, juvenile furniture, blackboards, clocks, bookcases, lounge furniture, key cabinets, files, wardrobes and similar equipment is illustrated and described. (Key No. 143)

• Disc dictating equipment is discussed in a new 12 page booklet entitled "Distinctly Yours" and released by Thomas A. Edison, Incorporated, West Orange, N.J. Describing the features of the Disc Edison Voicewriter, the booklet discusses Edison Hi-Definition recording, the advantages of double length indexing and other features of the equipment. (Key No. 144)

Methods Manuals

"How to Catch a Cold" is the title of a new motion picture which presents everyday common sense facts about colds which we all know but about which we need constantly to be reminded. Produced by Walt Disney Productions in color and sponsored by Kleenex, a product of International Cellulose Products Co., the picture is available on short-term loan through Association Films, Inc., 34 W. 45th St., New York 19. The value of the film as a reminder in helping to control the menace of the common cold is inestimable and should be of interest for showing to students, instructors, employees and community groups. The film is universal in its appeal, champions no remedies and is available without charge except postage. (Key No. 145)

An informative 12 page Swimming Pool Manual has been released by Koven Steel Swimming Pools, Inc., 155 Ogden Ave., Jersey City, N. J. The manual covers in detail all of the factors involved in planning municipal and community pools as well as pools for the college or other institutional use. Entitled "So You're Going to Build a Pool!" the manual discusses the advantages of a steel swimming pool and gives full design, construction and erection details. (Key No. 146)

A comprehensive "Food Serving Chart" has been prepared by Reid Murdoch, Division of Consolidated Grocers Corp., P. O. Box 5009, Chicago 80. Featuring Monarch Finer Foods, the chart gives weight or counts on fruits, vegetables, fish, meats, dried fruits and miscellaneous food items as well as the number of servings for various portion sizes. One page gives the approximate number of olives to the gallon for the various types and there is a detailed and complete set of charts giving portion costs per serving of canned foods. (Key No. 147)

Four articles on the "Control of Micro-organism Populations" have been made available in a booklet published by Wyandotte Chemicals Corp., Wyandotte, Mich. Written by Alfred L. Sotier of Wyandotte Chemicals Research Department, the Booklet, known as Form 1292, carries information on natural and man-made agencies which control organisms, chlorine germicides, quaternary ammonium germicides and detergent-sanitizers. (Key No. 148)

Suppliers' News

General Floorcraft, Inc., manufacturer of floor maintenance equipment, announces change of address from 333 Avenue of the Americas, New York 14, to 421 Hudson Street, New York 14.

That Wayne Gymstand Really Gets Around

WAYNE IRON WORKS

146 N. PEMBROKE AVE.

WAYNE, PENNA.

REPRESENTATIVES IN
42 CITIES



"Wayne Stands
for Safety"

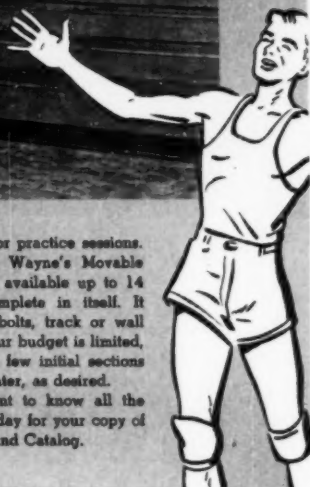
You'll like the adaptability of Wayne's Movable Rolling Gymstand . . . for each section can be quickly and easily moved to any desired location on the same floor level. Rubber wheels on the trucks give full protection to varnished gym floors.

Too, you'll appreciate the space-saving utility these stands provide. Like the Wayne fixed type gymstand, when they're in closed position, you have the extra floor space that's needed for

large gym classes or practice sessions.

Each section of Wayne's Movable Rolling Gymstand, available up to 14 rows deep, is complete in itself. It requires no floor bolts, track or wall fixtures. And, if your budget is limited, you can start with few initial sections and add to them later, as desired.

Since you'll want to know all the details, write us today for your copy of the Wayne Gymstand Catalog.



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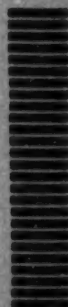
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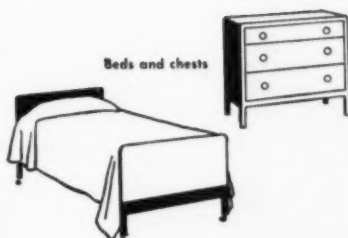
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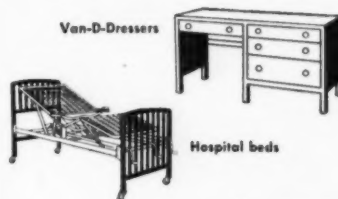
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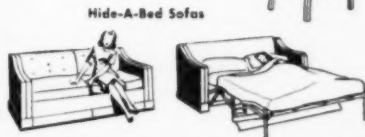
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